

A ¥EN to TRADE



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A ¥en to Trade

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A Yen to Trade

Introduction

A Yen to Trade is a set of lessons for students in the middle grades—grades 6-8. These lessons are written to help students understand the basic rationale for making trades, the gains that are possible from trade, and how trading is done between people of different countries. Each lesson teaches fundamental economic concepts such as scarcity, economic wants, resources, goods and services, opportunity cost, and money, as well as international trade concepts such as exports, imports, tariffs, quotas, embargos, exchange rates, and trade routes. Most lessons employ simulations and other active-learning strategies to engage students in the learning process and to provide experiences to help them discover why things happen as they do. Students do everything from taking on the role of traders in the real markets to jumping hurdles (to learn about trade barriers) and tossing a ball (to learn about trade routes). Activities integrate other curriculum areas including math, language arts, and geography.

We hope these lessons will help students develop a rich understanding of trade and a greater appreciation of how they are connected with other people around the world.

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A Yen to Trade

Lesson 1: Ringgits, Rupees, and Rials

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Standards and Benchmarks (see page 1.19)

Lesson Description

Students engage in a scavenger hunt to find the exchange rate for the currency of 24 countries (one for each letter of the alphabet, except W and X). They use the information and other resources to answer questions related to the geography, trade, and currency of these countries.

Grade Level

6-8

Concepts

Currency
Exchange rates
Money

Objectives

Students will be able to

- define currency, exchange rates, and money;
 - recognize that there are many countries in the world and that most have their own money;
 - explain why people in a country want to be paid for goods and services in their country's currency; and
 - compare the value of goods and services in different countries.
-

Compelling Question

How do people buy goods and services from people in other countries?

Time Required

90-120 minutes

Materials

- Visual 1-1, one copy for the teacher to display
 - Handout 1-1, one copy cut apart
 - Handouts 1-2, 1-3, and 1-4, one copy of each for each student
 - One U.S. dollar bill
 - Paper currency from another country or a picture of one
 - World map and online resources such as the CIA World Factbook:
<https://www.cia.gov/library/publications/the-world-factbook/>
-

Procedure

1. Hold up a U.S. dollar bill and discuss the following:
 - What is this? (*Money, a dollar bill*)
 - Who wants this? (*It is likely that everyone will want it.*)
 2. Hold up a piece of plain paper and discuss the following:
 - Who wants this? (*Some students may say they want it.*)
 - Why do all of you want the dollar bill but none or only some of you want the paper? Both are just pieces of paper. (*The dollar bill can be used to buy things.*)
 3. Explain that **money** is anything used as a medium of exchange; in other words, it is anything widely accepted in exchange for goods and services. Point out that in the United States, people accept U.S. dollars in trade for goods and services. You can take dollars to the store to buy goods and services. You can't use plain pieces of paper to buy things.
 4. Explain that paper money is called **currency** and that U.S. dollars are the currency of the United States. Hold up the paper currency of another country and ask students if they would rather have it or the dollar. (*Answers will vary, but the discussion should be focused on whether sellers in the United States are willing to accept the other money in exchange for goods and services. In other words, can the students use this currency to buy something of value at a store in the United States? Students might ask about the "value" of the currency; that is, "Is it worth as much as 1 U.S. dollar?" Point out that this is an important question; students would want the bill that will buy more goods and services.*)
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5. Explain that most sellers want to be paid in their country's money because they know that it is accepted by others in the country. In other words, they can easily trade it for goods and services. This means that if people want to buy something from someone in another country, they must use the money of the other country. In order to do this, people must trade their country's money for the money of the other country.
6. Explain that Mexican currency is called pesos. People in Mexico use pesos in their trades. Tell the students to imagine they are traveling in Mexico and want to buy souvenirs. Explain that souvenir sellers will want to be paid in pesos and that the travelers will need to exchange their country's money for pesos. Exchange happens when people use their country's money to buy another country's money. The amount of one country's money that people can buy with 1 unit of another country's money is the **exchange rate**—it is the price of one country's currency in terms of another country's currency.
7. Tell the students that the amount of pesos they can buy for 1 U.S. dollar is their exchange rate. If the exchange rate is 20 pesos for 1 dollar, they can buy 200 pesos for \$10, 2,000 pesos for \$100, and so on. Ask the students how many dollars they would need in order to buy a souvenir that has a price of 40 pesos. ($\$40/20 = \2.00)
8. Distribute an (approximately) equal number of exchange rate cards cut out from *Handout 1-1: Exchange Rate Cards* and a copy of *Handout 1-2: Money Around the World—Scavenger Hunt* to each student.

NOTE: The exchange rates on Handout 1-1 are the rounded values of actual exchange rates that prevailed in December 2018. For links to both current and historical exchange rates, see <https://www.fiscal.treasury.gov/reports-statements/treasury-reporting-rates-exchange/>.
9. Explain to the students that they are going to complete the first three columns of Handout 1-2. To accomplish this, they must find a country that starts with each letter of the alphabet (except for W and X), the name of each country's currency, and the dollar exchange rate for the currency. They should begin by listing the countries, currencies, and exchange rates found on the exchange cards they received. After they enter that information, they are free to move around the room sharing information with other students until they have completed all 24 entries. (*There are usually three possible countries for each letter; however, students should list only one country for each letter.*) Tell the students to return to their seats when they have completed the entries.
10. Distribute a copy of *Handout 1-3: Money Around the World—Questions* to each student. Instruct them to answer as many questions as they can by using the exchange rate information they gathered and by looking at online resources.
11. When students have completed the work, display *Visual 1-1: Money Around the World—Answer Key*. Have students provide the country names, currency names, exchange rates, and

answers to the corresponding questions. After the students have had a chance to look at the answers, discuss the following:

- The price of a hamburger and fries is 16 zlotych in Poland, and the price of the same size/quality hamburger and fries is 500 rials in Yemen. For which would you need fewer U.S. dollars? (*You would need fewer dollars in Yemen. You need \$4 to buy the hamburger and fries in Poland and \$2 to buy the hamburger and fries in Yemen.*)
- Why would exchange rate information be important to you if you were planning a trip to another country? (*The information would help you decide the amount of U.S. dollars required for the trip. You could make better planning decisions about hotels, souvenirs, and meals.*)
- How many of the European countries on the list use the currency called euros? (*Six*)
- Is the exchange rate for dollars the same in each of these countries? (*Yes*) How does having the same currency benefit people in these countries as well as visitors to these countries? (*It is much easier to travel within these countries and to buy and sell goods and services in these countries.*)

Closure

12. Discuss the following to emphasize the major points of the lesson:

- What is money? (*Anything widely accepted in exchange for goods and services*)
- What is currency? (*Paper money*)
- Do all countries use the same currency? (*No, generally each country has its own.*)
- Are there some countries that use the same currency? (*Yes, there are many European countries that use the same currency—euros.*)
- What is an exchange rate? (*The price of one country's currency in terms of another country's currency*)
- How do people buy goods and services from people in other countries? (*To buy goods and services from people in other countries, people must exchange their currency for the other country's currency.*)
- How do people from other countries buy goods and services from people in the United States? (*If people from other countries want to buy goods and services from people in the United States, they must exchange their country's currency for U.S. currency.*)

Assessment

13. Distribute a copy of *Handout 1-4: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. A seller in Econland would most likely want to trade his goods for
 - a. other goods.
 - b. U.S. dollars.
 - c. Japanese yen.
 - d. *the money of Econland.*
2. The exchange rate between rubles (the money of Russia) and U.S. dollars is 68 rubles for 1 dollar. How many rubles would you get for \$10?
 - a. \$6.8
 - b. \$68
 - c. \$680
 - d. \$6,800
3. The exchange rate between euros and dollars is 1 euro for 3 dollars. A toy in the United States sells for \$30. How many euros are needed to buy it?
 - a. 3 euros
 - b. 10 euros
 - c. 30 euros
 - d. 90 euros

Short Answer

4. Many countries of Europe use the same money, known as euros. Why would they want to have the same money instead of each country having its own?

A single currency makes trading easier among people in these countries because everyone in all of these countries will accept euros in trade. It also eliminates the need to exchange money when people trade with one another.

Extension

14. Instruct the students to locate other countries on a world map. Using reference sites and materials, they should identify the countries' currencies. Then, using online resources, students can locate the dollar exchange rates for these countries.
15. As a math extension, have students convert the exchange rates on the list so that they show the amount of U.S. dollars required to buy 1 unit of another country's currency. For example, 7 Danish kroner = 1 U.S. dollar; how many dollars are required to buy 1 krone? ($\$0.14 = 1$ krone)

Visual 1-1: Money Around the World—Answer Key (page 1 of 4)

Country	Currency Name	Exchange Rate	Answer
A. Argentina	Peso	38.5 Argentinean pesos = 1 U.S. dollar	No
A. Australia	Dollar	6 Australian dollars = 1 U.S. dollar	Yes
A. Azerbaijan	Manat	4 Azerbaijani manats = 3 U.S. dollars	No
B. Bangladesh	Taka	83 Bangladeshi takas = 1 U.S. dollar	830 takas
B. Bosnia and Herzegovina	Convertible mark	2 Bosnian convertible marks = 1 U.S. dollar	20 marks
B. Brazil	Real	4 Brazilian reais = 1 U.S. dollar	40 reais
B. Britain	Pound	6 British pounds = 5 U.S. dollars	12 pounds
C. Canada	Dollar	4 Canadian dollars = 3 U.S. dollars	United States
C. China	Yuan	7 Chinese yuan = 1 U.S. dollar	India, Mongolia, Kazakstan
C. Costa Rica	Colon	588 Costa Rican colones = 1 U.S. dollar	Nicaragua, Panama
C. Croatia	Kuna	7 Croatian kuna = 1 U.S. dollar	Bosnia and Herzegovina, Hungary, Montenegro, Serbia, Slovenia
C. Czech Republic	Koruna	25 Czech koruny = 1 U.S. dollar	Germany, Poland, Austria, Slovakia
D. Denmark	Krone	7 Danish kroner = 1 U.S. dollar	\$16
D. Dominican Republic	Peso	50 Dominican pesos = 1 U.S. dollar	\$2.24
E. Egypt	Pound	18 Egyptian pounds = 1 U.S. dollar	Mediterranean Sea
E. Estonia	Kroon	7 Estonian krooni = 1 U.S. dollar	Baltic Sea
F. Fiji	Dollar	2 Fijian dollars = 1 U.S. dollar	\$30

Visual 1-1: Money Around the World—Answer Key (page 2 of 4)

Country	Currency Name	Exchange Rate	Answer
<i>F. Finland</i>	<i>Euro</i>	<i>8 European euros = 7 U.S. dollars</i>	<i>\$52.50</i>
<i>F. France</i>	<i>Euro</i>	<i>8 European euros = 7 U.S. dollars</i>	<i>\$52.50</i>
<i>G. Germany</i>	<i>Euro</i>	<i>8 European euros = 7 U.S. dollars</i>	<i>Austria, Belgium, Czech Republic, Denmark, France, Luxemborg, Netherlands, Poland, Switzerland</i>
<i>G. Greece</i>	<i>Euro</i>	<i>8 European euros = 7 U.S. dollars</i>	<i>Albania, Bulgeria, Republic of Macedonia, Turkey</i>
<i>G. Guatemala</i>	<i>Quetzal</i>	<i>8 Guatemalan quetzals = 1 U.S. dollar</i>	<i>Belize, El Salvador, Honduras</i>
<i>H. Haiti</i>	<i>Gourde</i>	<i>77 Haitian gourdes = 1 U.S. dollar</i>	<i>7,700 gourdes</i>
<i>H. Honduras</i>	<i>Lempira</i>	<i>24 Honduran lempiras = 1 U.S. dollar</i>	<i>2,400 lempiras</i>
<i>H. Hungary</i>	<i>Forint</i>	<i>282 Hungarian forints= 1 U.S. dollar</i>	<i>28,200 forints</i>
<i>I. India</i>	<i>Rupee</i>	<i>70 Indian rupees = 1 U.S. dollar</i>	<i>No</i>
<i>I. Ireland</i>	<i>Euro</i>	<i>8 European euros = 7 U.S. dollars</i>	<i>No</i>
<i>I. Israel</i>	<i>New shekel</i>	<i>4 Israeli new shekels = 1 U.S. dollar</i>	<i>Yes</i>
<i>J. Jamaica</i>	<i>Dollar</i>	<i>128 Jamaican dollars = 1 U.S. dollar</i>	<i>Yes</i>
<i>J. Japan</i>	<i>Yen</i>	<i>110 Japanese yen = 1 U.S. dollar</i>	<i>Yes</i>
<i>J. Jordan</i>	<i>Dinar</i>	<i>1 Jordanian dinar = 1 U.S. dollar</i>	<i>No</i>
<i>K. Kazakhstan</i>	<i>Tenge</i>	<i>371 Kazakhstan tenges = 1 U.S. dollar</i>	<i>Export</i>
<i>K. Kenya</i>	<i>Shilling</i>	<i>74 Kenyan shillings = 1 U.S. dollar</i>	<i>Import</i>
<i>K. Kuwait</i>	<i>Dinar</i>	<i>3 Kuwaiti dinars = 1 U.S. dollar</i>	<i>Export</i>

Visual 1-1: Money Around the World—Answer Key (page 3 of 4)

Country	Currency Name	Exchange Rate	Answer
<i>L. Laos</i>	<i>Kip</i>	<i>8,545 Laotian kips = 1 U.S. dollar</i>	<i>Less</i>
<i>L. Latvia</i>	<i>Lats</i>	<i>0.6 Latvian lati = 1 U.S. dollar</i>	<i>More</i>
<i>L. Libya</i>	<i>Dinar</i>	<i>6 Libyan dinars = 4 U.S. dollars</i>	<i>More</i>
<i>M. Malaysia</i>	<i>Ringgit</i>	<i>4 Malaysian ringgits = 1 U.S. dollar</i>	<i>No</i>
<i>M. Mexico</i>	<i>Peso</i>	<i>20 Mexican pesos = 1 U.S. dollar</i>	<i>Yes</i>
<i>M. Mozambique</i>	<i>Metical</i>	<i>63 Mozambiquen meticals = 1 U.S. dollar</i>	<i>No</i>
<i>N. Nepal</i>	<i>Rupee</i>	<i>112 Nepalese rupees = 1 U.S. dollar</i>	<i>No</i>
<i>N. New Zealand</i>	<i>Dollar</i>	<i>3 New Zealand dollars = 1 U.S. dollar</i>	<i>Yes</i>
<i>N. Nigeria</i>	<i>Naira</i>	<i>357 Nigerian naira = 1 U.S. dollar</i>	<i>Yes</i>
<i>O. Oman</i>	<i>Rial</i>	<i>3 Omani rials = 1 U.S. dollar</i>	<i>Oil</i>
<i>P. Paraguay</i>	<i>Guarani</i>	<i>5,925 Paraguayan guaranties = 1 U.S. dollar</i>	<i>Less</i>
<i>P. Philippines</i>	<i>Peso</i>	<i>53 Philippine pesos = 1 U.S. dollar</i>	<i>More</i>
<i>P. Poland</i>	<i>Zloty</i>	<i>4 Polish zlotych = 1 U.S. dollar</i>	<i>More</i>
<i>Q. Qatar</i>	<i>Riyal</i>	<i>4 Qatari riyals = 1 U.S. dollar</i>	<i>Less</i>
<i>R. Romania</i>	<i>Leu</i>	<i>4 Romanian lei = 1 U.S. dollar</i>	<i>Smaller</i>
<i>R. Russia</i>	<i>Ruble</i>	<i>68 Russian rubles = 1 U.S. dollar</i>	<i>Larger</i>
<i>R. Rwanda</i>	<i>Franc</i>	<i>875 Rwandan francs = 1 U.S. dollar</i>	<i>Smaller</i>
<i>S. South Korea</i>	<i>Won</i>	<i>1,125 South Korean won = 1 U.S. dollar</i>	<i>Asia</i>

Visual 1-1: Money Around the World—Answer Key (page 4 of 4)

Country	Currency Name	Exchange Rate	Answer
<i>S. Spain</i>	<i>Euro</i>	<i>8 European euros = 7 U.S. dollars</i>	<i>Europe</i>
<i>S. Swaziland</i>	<i>Rand</i>	<i>15 African rand = 1 U.S. dollar</i>	<i>Africa</i>
<i>T. Tanzania</i>	<i>Shilling</i>	<i>2,310 Tanzanian shillings = 1 U.S. dollar</i>	<i>South</i>
<i>T. Thailand</i>	<i>Baht</i>	<i>33 Thai bahts = 1 U.S. dollar</i>	<i>North</i>
<i>T. Turkey</i>	<i>Lira</i>	<i>5 Turkish liras = 1 U.S. dollar</i>	<i>North</i>
<i>U. Uganda</i>	<i>Shilling</i>	<i>3,709 Ugandan shillings = 1 U.S. dollar</i>	<i>Kampala</i>
<i>U. Ukraine</i>	<i>Hryvnia</i>	<i>27 Ukrainian hryvnia = 1 U.S. dollar</i>	<i>Kiev</i>
<i>U. Uzbekistan</i>	<i>Som</i>	<i>8,337 Uzbekistan soms = 1 U.S. dollar</i>	<i>Tashkent</i>
<i>V. Vanuatu</i>	<i>Vatu</i>	<i>114 Vanuatu vatu = 1 U.S. dollar</i>	<i>Eastern</i>
<i>V. Venezuela</i>	<i>Bolivar</i>	<i>248,526 Venezuelan bolivars = 1 U.S. dollar</i>	<i>Western</i>
<i>V. Vietnam</i>	<i>Dong</i>	<i>23,295 Vietnamese dong = 1 U.S. dollar</i>	<i>Eastern</i>
<i>Y. Yemen</i>	<i>Rial</i>	<i>250 Yemeni rials = 1 U.S. dollar</i>	<i>No</i>
<i>Z. Zambia</i>	<i>Kwacha</i>	<i>12 Zambian kwacha = 1 U.S. dollar</i>	<i>No</i>
<i>Z. Zimbabwe</i>	<i>Dollar</i>	<i>250,000,000,000,000 Zimbabwe dollars = 1 U.S. dollar</i>	<i>Yes</i>

Handout 1-1: Exchange Rate Cards (page 1 of 6)

<p>Country: Argentina</p> <p>Currency: Argentinean peso</p> <p>Exchange rate: 38.5 Argentinean pesos = 1 U.S. dollar</p>	<p>Country: Australia</p> <p>Currency: Australian dollar</p> <p>Exchange rate: 6 Australian dollars = 1 U.S. dollar</p>
<p>Country: Azerbaijan</p> <p>Currency: Azerbaijani manat</p> <p>Exchange rate: 4 Azerbaijani manats = 3 U.S. dollars</p>	<p>Country: Bangladesh</p> <p>Currency: Bangladeshi taka</p> <p>Exchange rate: 83 Bangladeshi takas = 1 U.S. dollar</p>
<p>Country: Bosnia and Herzegovina</p> <p>Currency: Bosnian convertible mark</p> <p>Exchange rate: 2 Bosnian convertible marks = 1 U.S. dollar</p>	<p>Country: Brazil</p> <p>Currency: Brazilian real</p> <p>Exchange rate: 4 Brazilian reais = 1 U.S. dollar</p>
<p>Country: Britain</p> <p>Currency: British pound</p> <p>Exchange rate: 6 British pounds = 5 U.S. dollars</p>	<p>Country: Canada</p> <p>Currency: Canadian dollar</p> <p>Exchange rate: 4 Canadian dollars = 3 U.S. dollars</p>
<p>Country: China</p> <p>Currency: Chinese yuan</p> <p>Exchange rate: 7 Chinese yuan = 1 U.S. dollar</p>	<p>Country: Costa Rica</p> <p>Currency: Costa Rican colon</p> <p>Exchange rate: 588 Costa Rican colones = 1 U.S. dollar</p>
<p>Country: Croatia</p> <p>Currency: Croatian kuna</p> <p>Exchange rate: 7 Croatian kuna = 1 U.S. dollar</p>	<p>Country: Czech Republic</p> <p>Currency: Czech koruna</p> <p>Exchange rate: 25 Czech koruny = 1 U.S. dollar</p>

Handout 1-1: Exchange Rate Cards (page 2 of 6)

<p>Country: Denmark</p> <p>Currency: Danish krone</p> <p>Exchange rate: 7 Danish kroner = 1 U.S. dollar</p>	<p>Country: Dominican Republic</p> <p>Currency: Dominican peso</p> <p>Exchange rate: 50 Dominican pesos = 1 U.S. dollar</p>
<p>Country: Egypt</p> <p>Currency: Egyptian pound</p> <p>Exchange rate: 18 Egyptian pounds = 1 U.S. dollar</p>	<p>Country: Estonia</p> <p>Currency: Estonian kroon</p> <p>Exchange rate: 7 Estonian krooni = 1 U.S. dollar</p>
<p>Country: Fiji</p> <p>Currency: Fijian dollar</p> <p>Exchange rate: 2 Fijian dollars = 1 U.S. dollar</p>	<p>Country: Finland</p> <p>Currency: European euro</p> <p>Exchange rate: 8 European euros = 7 U.S. dollars</p>
<p>Country: France</p> <p>Currency: European euro</p> <p>Exchange rate: 8 European euros = 7 U.S. dollars</p>	<p>Country: Germany</p> <p>Currency: European euro</p> <p>Exchange rate: 8 European euros = 7 U.S. dollars</p>
<p>Country: Greece</p> <p>Currency: European euro</p> <p>Exchange rate: 8 European euros = 7 U.S. dollars</p>	<p>Country: Guatemala</p> <p>Currency: Guatemalan quetzal</p> <p>Exchange rate: 8 Guatemalan quetzals = 1 U.S. dollar</p>
<p>Country: Haiti</p> <p>Currency: Haitian gourde</p> <p>Exchange rate: 77 Haitian gourdes = 1 U.S. dollar</p>	<p>Country: Honduras</p> <p>Currency: Honduran lempira</p> <p>Exchange rate: 24 Honduran lempiras = 1 U.S. dollar</p>

Handout 1-1: Exchange Rate Cards (page 3 of 6)

<p>Country: Hungary</p> <p>Currency: Hungarian forint</p> <p>Exchange rate: 282 Hungarian forints = 1 U.S. dollar</p>	<p>Country: India</p> <p>Currency: Indian rupee</p> <p>Exchange rate: 70 Indian rupees = 1 U.S. dollar</p>
<p>Country: Ireland</p> <p>Currency: European euro</p> <p>Exchange rate: 8 European euros = 7 U.S. dollars</p>	<p>Country: Israel</p> <p>Currency: Israeli new shekel</p> <p>Exchange rate: 4 Israeli new shekels = 1 U.S. dollar</p>
<p>Country: Jamaica</p> <p>Currency: Jamaican dollar</p> <p>Exchange rate: 128 Jamaican dollars = 1 U.S. dollar</p>	<p>Country: Japan</p> <p>Currency: Japanese yen</p> <p>Exchange rate: 110 Japanese yen = 1 U.S. dollar</p>
<p>Country: Jordan</p> <p>Currency: Jordanian dinar</p> <p>Exchange rate: 1 Jordanian dinar = 1 U.S. dollar</p>	<p>Country: Kazakhstan</p> <p>Currency: Kazakhstan tenge</p> <p>Exchange rate: 371 Kazakhstan tenges = 1 U.S. dollar</p>
<p>Country: Kenya</p> <p>Currency: Kenyan shilling</p> <p>Exchange rate: 74 Kenyan shillings = 1 U.S. dollar</p>	<p>Country: Kuwait</p> <p>Currency: Kuwaiti dinar</p> <p>Exchange rate: 3 Kuwaiti dinars = 1 U.S. dollar</p>
<p>Country: Laos</p> <p>Currency: Laotian kip</p> <p>Exchange rate: 8,545 Laotian kips = 1 U.S. dollar</p>	<p>Country: Latvia</p> <p>Currency: Latvian lats</p> <p>Exchange rate: 0.6 Latvian lati = 1 U.S. dollar</p>

Handout 1-1: Exchange Rate Cards (page 4 of 6)

<p>Country: Libya</p> <p>Currency: Libyan dinar</p> <p>Exchange rate: 6 Libyan dinars = 4 U.S. dollars</p>	<p>Country: Malaysia</p> <p>Currency: Malaysian ringgit</p> <p>Exchange rate: 4 Malaysian ringgits = 1 U.S. dollar</p>
<p>Country: Mexico</p> <p>Currency: Mexican peso</p> <p>Exchange rate: 20 Mexican pesos = 1 U.S. dollar</p>	<p>Country: Mozambique</p> <p>Currency: Mozambiquen metical</p> <p>Exchange rate: 63 Mazambiquen meticals = 1 U.S. dollar</p>
<p>Country: Nepal</p> <p>Currency: Nepalese rupee</p> <p>Exchange rate: 112 Nepalese rupees = 1 U.S. dollar</p>	<p>Country: New Zealand</p> <p>Currency: New Zealand dollar</p> <p>Exchange rate: 3 New Zealand dollars = 1 U.S. dollars</p>
<p>Country: Nigeria</p> <p>Currency: Nigerian naira</p> <p>Exchange rate: 357 Nigerian naira = 1 U.S. dollar</p>	<p>Country: Oman</p> <p>Currency: Omani rial</p> <p>Exchange rate: 3 Omani rials = 1 U.S. dollar</p>
<p>Country: Paraguay</p> <p>Currency: Paraguayan guarani</p> <p>Exchange rate: 5,925 Paraguayan guaranties = 1 U.S. dollar</p>	<p>Country: Philippines</p> <p>Currency: Philippine peso</p> <p>Exchange rate: 53 Philippine pesos = 1 U.S. dollar</p>
<p>Country: Poland</p> <p>Currency: Polish zloty</p> <p>Exchange rate: 4 Polish zlotych = 1 U.S. dollar</p>	<p>Country: Qatar</p> <p>Currency: Qatari riyal</p> <p>Exchange rate: 4 Qatari riyals = 1 U.S. dollar</p>

Handout 1-1: Exchange Rate Cards (page 5 of 6)

<p>Country: Romania</p> <p>Currency: Romanian leu</p> <p>Exchange rate: 4 Romanian lei = 1 U.S. dollar</p>	<p>Country: Russia</p> <p>Currency: Russian ruble</p> <p>Exchange rate: 68 Russian rubles = 1 U.S. dollar</p>
<p>Country: Rwanda</p> <p>Currency: Rwandan franc</p> <p>Exchange rate: 875 Rwandan francs = 1 U.S. dollar</p>	<p>Country: South Korea</p> <p>Currency: South Korean won</p> <p>Exchange rate: 1,125 South Korean won = 1 U.S. dollar</p>
<p>Country: Spain</p> <p>Currency: European euro</p> <p>Exchange rate: 8 European euros = 7 U.S. dollars</p>	<p>Country: Swaziland</p> <p>Currency: African rand</p> <p>Exchange rate: 15 African rand = 1 U.S. dollar</p>
<p>Country: Tanzania</p> <p>Currency: Tanzania shilling</p> <p>Exchange rate: 2,310 Tanzanian shillings = 1 U.S. dollar</p>	<p>Country: Thailand</p> <p>Currency: Thai baht</p> <p>Exchange rate: 33 Thai bahts = 1 U.S. dollar</p>
<p>Country: Turkey</p> <p>Currency: Turkish lira</p> <p>Exchange rate: 5 Turkish liras = 1 U.S. dollar</p>	<p>Country: Uganda</p> <p>Currency: Ugandan shilling</p> <p>Exchange rate: 3,709 Ugandan shillings = 1 U.S. dollar</p>
<p>Country: Ukraine</p> <p>Currency: Ukrainian hryvnia</p> <p>Exchange rate: 27 Ukrainian hryvnia = 1 U.S. dollar</p>	<p>Country: Uzbekistan</p> <p>Currency: Uzbekistan som</p> <p>Exchange rate: 8,337 Uzbekistan soms = 1 U.S. dollar</p>

Handout 1-1: Exchange Rate Cards (page 6 of 6)

<p>Country: Vanuatu</p> <p>Currency: Vanuatu vatu</p> <p>Exchange rate: 114 Vanuatu vatu = 1 U.S. dollar</p>	<p>Country: Venezuela</p> <p>Currency: Venezuelan bolivar</p> <p>Exchange rate: 248,568 Venezuelan bolivars = 1 U.S. dollar</p>
<p>Country: Vietnam</p> <p>Currency: Vietnamese dong</p> <p>Exchange rate: 23,295 Vietnamese dong = 1 U.S. dollar</p>	<p>Country: Yemen</p> <p>Currency: Yemeni rial</p> <p>Exchange rate: 250 Yemeni rials = 1 U.S. dollar</p>
<p>Country: Zambia</p> <p>Currency: Zambian kwacha</p> <p>Exchange rate: 12 Zambian kwacha = 1 U.S. dollar</p>	<p>Country: Zimbabwe</p> <p>Currency: Zimbabwe dollar</p> <p>Exchange rate: 250,000,000,000 Zimbabwe dollars = 1 U.S. dollar</p>

Handout 1-2: Money Around the World—Scavenger Hunt

Country	Currency name	Exchange rate	Answer
A.			
B.			
C.			
D.			
E.			
F.			
G.			
H.			
I.			
J.			
K.			
L.			
M.			
N.			
O.			
P.			
Q.			
R.			
S.			
T.			
U.			
V.			
Y.			
Z.			

Handout 1-3: Money Around the World—Questions

- A. Is your “A” country a popular place for U.S. tourists?
- B. How much money of your “B” country is needed to buy a \$10 game in the United States?
- C. Name a country that borders your “C” country with which it is likely to trade.
- D. One hundred twelve units of money of your “D” country is equal to how many U.S. dollars?
- E. Name the largest body of water that borders your “E” country.
- F. A shirt with a price of 60 units of your “F” country’s money would cost how many U.S. dollars?
- G. What countries border your “G” country?
- H. How much of your “H” country’s money would you get for \$100?
- I. Is 1 unit of your “I” country’s money worth about as much as 1 U.S. quarter?
- J. Is your “J” country an island nation?
- K. Does your “K” country import or export oil?
- L. Is 1 unit of your “L” country’s money worth more or less than 1 U.S. dollar?
- M. Does any other country call their money the same thing as your “M” country?
- N. Does your “N” country have an ocean port to help in trading with the rest of the world?
- O. What is an important export of your “O” country?
- P. Is 1 unit of your “P” country’s money worth more or less than 1 U.S. penny?
- Q. If 5 units (instead of 4) of your “Q” country’s currency equaled 1 U.S. dollar, would its money be worth more or less?
- R. Is your “R” country larger or smaller than the United States in size?
- S. On which continent is your “S” country?
- T. Is your “T” country north or south of the equator?
- U. What is the capital of your “U” country?
- V. Is your “V” country in the eastern or western hemisphere?
- Y. Is your “Y” country a major trading partner of the United States?
- Z. Is your “Z” country’s money called dollars?

Handout 1-4: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. A seller in Econland would most likely want to trade his goods for
 - a. other goods.
 - b. U.S. dollars.
 - c. Japanese yen.
 - d. the money of Econland.
2. The exchange rate between rubles (the money of Russia) and U.S. dollars is 68 rubles for 1 dollar. How many rubles would you get for \$10?
 - a. \$6.8
 - b. \$68
 - c. \$680
 - d. \$6,800
3. The exchange rate between euros and dollars is 1 euro for 3 dollars. A toy in the United States sells for \$30. How many euros are needed to buy it?
 - a. 3 euros
 - b. 10 euros
 - c. 30 euros
 - d. 90 euros

Short Answer

Directions: Answer the question below using complete sentences.

4. Many countries of Europe use the same money, known as euros. Why would they want to have the same money instead of each country having its own?

Standards and Benchmarks

National Content Standards in Economics

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

Standard 11: Money and Inflation

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmark: Grade 4**

1. Money is anything widely accepted as final payment for goods and services.

A Yen to Trade

Lesson 2: Let's Make a Deal

Author

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Standards and Benchmarks (see page 2.11)

Lesson Description

Students bring in items from home to trade in a class flea market. In this activity, they learn what conditions are necessary for two people to agree to a trade and how trading makes people better off. They also discover that the more people they are allowed to trade with, the more likely they are to find a beneficial trade. These ideas are the basis for international trade among countries.

Grade Level

6-8

Concepts

Economic wants
Goods
International trade
Services
Trade
Value

Objectives

Students will be able to

- define economic wants, goods, international trade, services, trade, and value;
 - describe what conditions are necessary before a trade will occur;
 - explain why both parties in a voluntary trade are made better off by the trade;
 - tell why trades are more likely as the number of traders increases; and
-

- explain that all trades, even those between two countries, are actually trades among individuals.

Compelling Question

Why do people engage in trade?

Time Required

Day 1: 15 minutes

Day 2: 45-60 minutes

Materials

- Handout 2-1, one copy for each student
 - Handout 2-2, one copy for each student and one copy for the teacher to display
 - Handout 2-3, one copy for each student
 - Small bowl of broccoli (or another unpopular vegetable with kids)
-

Procedure

Day 1

1. Explain that people have many economic wants. **Economic wants** are desires that can be satisfied by consuming goods and services. Define **goods** as objects that satisfy people's wants and **services** as actions that satisfy people's wants. Ask the students to provide examples of goods and services and the economic wants they satisfy. (*Answers may include the following: A bicycle is a good that satisfies people's desire to exercise, play, or move from one place to another. Water and sodas are goods that satisfy people's thirst. Riding a roller coaster at an amusement park is a service that satisfies people's desire for fun and/or excitement. Getting a check-up from a doctor is a service that satisfies people's desire for good health.*)
 2. Explain that a good or service is valuable to a person if it satisfies an economic want he or she has. Define the **value** of a good or service as the amount of satisfaction or happiness it provides to a particular person. Work through the following:
 - Show the class a small bowl of broccoli and ask them to raise their hands if they'd like this broccoli as a snack. (*Answers will vary.*)
 - Ask those who didn't raise their hands to explain why they did not want the broccoli. (*Answers may include that they don't like the taste.*) Point out that the broccoli has no value for them because it wouldn't satisfy any want they have, so it wouldn't make them any happier.
-

- Next, ask those who did raise their hands why they wanted the broccoli. (*Answers may include that they like the taste, are hungry, or want the nutrients.*) Point out that the broccoli has value for them because it would satisfy a want, so it would make them happier.
3. Tell the students that you are planning a class flea market (give them a specific date). Explain that a flea market is a place where people can make trades. **Trade** is the exchange of goods or services for other goods or services or for money. At the flea market, students will be trading goods for goods without the use of money. Each student should bring in several small items from home (old toys, wrapped snacks, stickers, pencils, baseball cards, etc.) Give a copy of *Handout 2-1: Flea Market Letter* to each student and tell them to share it with a parent or guardian.
 4. Remind the students the day before the flea market to think about the value of the items that they bring. Although they should not bring in things that have a high value, they should try to bring things for which other students would want to trade.

Day 2

5. Welcome the students to the flea market. Instruct them to display their trading items on their desks. Explain that they may trade items with people sitting around them—that is, directly in front of or behind them or immediately to the left or right. Trades need not be one-for-one. If someone wants to trade two or three items for one item, that is permissible. Also remind them that trading is not required. If they don't want to trade, it is okay. Allow a few minutes for trading. After the trading period, discuss the following:
 - How many of you are happier with the items you now have than with the items you had before? (*Those who made trades should feel better off.*)
 - How many of you are less happy with what you have now than with what you had before? (*No students should raise their hands. If they do, ask why they voluntarily made trades that made them worse off. They'll probably indicate that they thought it was fun to simply trade.*)
 - Did anyone choose not to trade? Are you happier or less happy? (*Anyone who didn't trade shouldn't be happier or less happy. He or she has the same items; therefore, the same level of satisfaction.*)
 - Did anyone want to trade but was unable to do so? (*Some students may have wanted to trade, but other students may not have wanted what they had to offer.*)
6. Tell the students they may now trade with anyone in the room. Allow 5-10 minutes for trading. After the trading period, discuss the following:
 - How many of you are happier now than you were after the last round of trading? (*Those making trades should raise their hands.*)

- How many of you are less happy now than you were after the first round of trading? (*Again, no one should be, although some may voice envy over what others have, which makes them even less satisfied with their item than before trading.*)
 - How many of you are equally happy? (*Those who didn't trade should be equally happy with the same goods; but again, they may have been made less satisfied with their good[s], having been unable to make a trade.*)
7. Ask the students to explain why trading made most of them better off without making anyone worse off. (*They only made trades if they got something more valuable to them than what they gave up. It wouldn't be wise to trade unless you were better off.*) Restate that people only make trades if they get something more valuable to them than what they gave up.
- NOTE: Students may have traded because they wanted to be involved in the activity with their friends or wanted to be nice to someone. Even in these cases, they are better off after the trade. They received value from trading with friends. In other cases, students may have become less satisfied with their good if no one wanted to trade for it or if they saw items that were much better being traded. Explain that each good still has the same function as it did before.
8. Distribute a copy of *Handout 2-2: Trade or No Trade* to each student and display a visual of the handout. Tell the students that this activity will help them understand why trades did or did not occur. Explain that the girl has an orange and the boy has a pear. The emojis show which of the two items each person values the most. Using the handout, discuss the following:
- Will the boy and girl trade in Case 1? Why or why not? (*No, the boy would not want to trade. He values the pear more than the orange.*)
 - Will the boy and girl trade in Case 2? Why or why not? (*No, the girl would not trade because she values the orange more than the pear.*)
 - Will the boy and girl trade in Case 3? Why or why not? (*Yes, the boy values the orange more, and the girl values the pear more. They will both be better off if they trade.*)
 - Will the boy and girl trade in Case 4? Why or why not? (*No, the boy and girl value what they have more, so they would not trade.*)
 - Look at Case 1. What does the girl want? (*The pear*) What would happen if we added a third person who had a pear but valued an orange more? (*Then the girl could trade with that person, and they would both be better off.*)
 - Why was trade among all students better than trade with only the students directly around the desks? (*There were more people trading with one another and a greater chance of finding trades that both people wanted to make.*)
9. Tell the students to turn Handout 2-2 over and to draw a set of emojis that represents a trade they made in class or a set of emojis that represents a trade they weren't able to make. Allow time for a few students to share their drawings.

10. Point out that although the same items are present in the classroom that were there before everyone traded, the total value (total satisfaction) the students are getting from them is greater. This happens because trading moves goods to people who value them more highly. Thus, trading alone has increased the value of the items that were brought to class.

11. Compare the class trading activity with international trade. Remind the students that they are citizens of a country. Explain that the first round of trading was like trading with people in their own country. Ask students on one side of the room to raise their hands if they traded with students on the other side of the room. Ask them to think about what trading with students on the other side of the room could be compared with. (*Trading with people in other countries*) Explain the following:
 - **International trade** is when people of different countries trade with one another. It allows people to get things they value more and makes them better off. Therefore, the greater the number of people with whom they are able to trade, the more likely they are to find trades.

Closure

12. Discuss the following to emphasize the major points of the lesson:
 - What are economic wants? (*Desires that can be satisfied by consuming goods and services*)
 - What are goods? Give some examples. (*Objects that satisfy people's wants, such as pizzas, cars, shirts, and houses*)
 - What are services? Give some examples. (*Actions that satisfy people's wants, such as haircuts, setting a broken leg, and teaching school*)
 - When are goods and services valuable to a person? (*When they are able to satisfy that person's economic wants*)
 - Why do people trade? (*Because they expect to gain, otherwise they wouldn't trade*)
 - How do traders gain from a trade? (*They get more satisfaction or value from the good received than from the good they traded away.*)
 - How does trade increase the value of goods and services? (*When goods move from people who value them less to people who value them more, the total value received from those goods increases.*)
 - Why is having more people to trade with better? (*The chances of finding trades that make both people better off are increased.*)
 - Are the benefits from trade lost if traders are from different countries? (*No, people engage in international trade because it makes them better off.*)

Assessment

13. Distribute a copy of *Handout 2-3: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

- Derek wants his ham sandwich more than he wants Ramona's tuna sandwich. Ramona wants her tuna sandwich less than she wants Derek's ham sandwich. Given this,
 - Derek and Ramona aren't likely to trade sandwiches.*
 - Derek and Ramona are likely to trade sandwiches.
 - Derek will end up with both sandwiches.
 - Ramona will end up with both sandwiches.
- James trades one of his baseball cards for one of Clark's superhero comic books. Who gains from this trade?
 - James
 - Clark
 - Both James and Clark*
 - Neither James nor Clark
- If we want people in Los Angeles, California, to be as happy as possible, it's best if they are allowed to trade with
 - only people in Los Angeles.
 - only people in California.
 - only people in the United States.
 - anyone in the world.*

Short Answer

4. Give two reasons why a poor person in a remote area is likely less able to make trades that make him or her better off.

This person may not have many goods or services for which other people would wish to trade. Living in a remote area means there are likely less people to trade with in the first place.

Extension

14. For homework, students should list goods in their homes that were made in another country. They should write the country of origin for each item on the list. When students return with their lists, ask why their families bought these goods. Remind them that people trade when they value what they receive more than what they give up. Their families bought these goods, giving up other goods that they valued less.

15. On a wall world map, place a push pin at your town's location. Place push pins in all countries reported from the homework assignment and tie a string from each push pin to your city. Remind students that the goods must have value to their families or they would not have purchased them. Follow-up the activity by discussing how people trading with people in different countries increases the total value of the goods.

Handout 2-1: Flea Market Letter

Dear Parent/Guardian:

On _____, students will participate in a class flea market. Each child should bring (no more than five) small items to school to trade in our flea market. Acceptable items to send include pencils, stickers, small (old, no longer wanted) toys, and other items that do not have a high price.

These trades will be “for good” (that is, permanent), so students should not bring anything that later they will regret giving up.

Sincerely,

Handout 2-2: Trade or No Trade

The  has an . The  has a .

Case 1:



___ Trade ___ No trade

Why? _____

Case 2:



___ Trade ___ No trade

Why? _____

Case 3:



___ Trade ___ No trade

Why? _____

Case 4:



___ Trade ___ No trade

Why? _____

Handout 2-3: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. Derek wants his ham sandwich more than he wants Ramona's tuna sandwich. Ramona wants her tuna sandwich less than she wants Derek's ham sandwich. Given this,
 - a. Derek and Ramona aren't likely to trade sandwiches.
 - b. Derek and Ramona are likely to trade sandwiches.
 - c. Derek will end up with both sandwiches.
 - d. Ramona will end up with both sandwiches.
2. James trades one of his baseball cards for one of Clark's superhero comic books. Who gains from this trade?
 - a. James
 - b. Clark
 - c. Both James and Clark
 - d. Neither James nor Clark
3. If we want people in Los Angeles, California, to be as happy as possible, it's best if they are allowed to trade with
 - a. only people in Los Angeles.
 - b. only people in California.
 - c. only people in the United States.
 - d. anyone in the world.

Short Answer

Directions: Answer the following question using complete sentences.

4. Give two reasons why a poor person in a remote area is likely less able to make trades that make him or her better off.

Standards and Benchmarks

National Content Standards in Economics

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 4**
 1. Exchange is trading goods and services with people for other goods and services (called barter) or for money.
 3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more informal exchanges of favors and courtesies.
- **Benchmarks: Grade 8**
 1. When people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.
 2. Free trade increases worldwide material standards of living.

A Yen to Trade

Lesson 3: The Tortoise and the Hare

Author

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Standards and Benchmarks (see page 3.13)

Lesson Description

Pairs of students play the roles of the tortoise and the hare, working together to win a contest. Through trial and error, they discover the benefits of specialization, and they determine who has a comparative advantage. They then generalize this knowledge to countries.

Grade Level

6-8

Concepts

Comparative advantage

Opportunity cost

Specialization

Objectives

Students will be able to

- define comparative advantage, opportunity cost, and specialization;
 - identify who has a comparative advantage in a given situation; and
 - explain why individuals and countries should specialize in producing those things in which they have a comparative advantage.
-

Compelling Question

Why should individuals and countries specialize in producing things in which they have a comparative advantage?

Time Required

40-60 minutes

Materials

- Visual 3-1, one copy for the teacher to display
 - Handout 3-1, one copy for each pair of students
 - Handout 3-2, one copy for each pair of students and one copy for the teacher to display
 - Handout 3-3, one copy for each student
 - Handout 3-4, one copy for each pair of students (optional)
 - Scissors, one pair for each pair of students
-

Preparation

1. For the optional character headbands from *Handout 3-4: Tortoise and Hare Illustrations*, use the following:
 - One blank 8½" x 11" sheet of paper for each student pair
 - Stapler or tape
 - Scissors
2. Cut out each picture from the handout. Using an 8½" x 11" sheet of paper, cut out four 1½" x 11" strips of paper. Tape or staple two strips of paper together at the ends to make a longer strip. Do the same with the other two strips. Staple or tape the longer strips to the bottom corners of each character picture to make a headband that will fit around the top of a student's head. When students are directed to put on the headbands, tape can be used to secure it on their heads. Repeat the instructions for each character headband.

NOTE: The headbands can be laminated and Velcro® fastened on each end so that they can be reused. After each use, they can be gently wiped down.

Procedure

1. Display *Visual 3-1: The Big Harvesting Event* and read the story to the class. Then pair students, explaining that one will play the role of the hare, the other the tortoise. Let them decide who will play each role.
 - Optional: Distribute character headbands from Handout 3-4 or instruct students on how to make the headband for their chosen role using the instructions in the Preparation section.
-

2. Distribute a pair of scissors and a copy of *Handout 3-1: Carrot and Lettuce Cards* to each student pair. Tell them to cut out the cards along the dotted lines. Explain that the cards represent the 5 carrots and 5 heads of lettuce that must be harvested during the event.

3. Distribute a copy of *Handout 3-2: Harvesting Times* to each student and display a copy of it. Tell students to cut the handout along the dotted line, with each student taking the half for his or her role. Explain that each pair of students is to find the fastest way to divide the task of harvesting 5 carrots and 5 heads of lettuce. The worksheets on Handout 3-2 should be used to help determine how much time would be used. Use the following examples to model the process:
 - Suppose that a team decides to split the task so that the hare harvests 3 carrots and 2 heads of lettuce. The tortoise does just the opposite; that is, he harvests 2 carrots and 3 heads of lettuce.
 - Using one pair's cards, show how the cards are divided between the two students (the hare and the tortoise). Give 3 carrot and 2 lettuce cards to the hare; give 2 carrot and 3 lettuce cards to the tortoise. Tell student pairs to do the same.
 - Using your copy of Handout 3-2, enter "1" under column (1) in the first empty row on both worksheets, explaining that this is the first option. Tell all hares and tortoises to do the same.
 - Tell the students to write the number of heads of lettuce under column (2). Enter those numbers on your copy for the hare and tortoise. (*2 for the hare; 3 for the tortoise*)
 - Have students calculate the number of minutes it would take to harvest their heads of lettuce by multiplying the amount in column (2) by the number of minutes required to harvest lettuce for their animals. Write the answers on the handout. (*4 minutes for the hare; 15 minutes for the tortoise*)
 - Follow the same procedure to record the minutes required to harvest carrots in column (5). Write the answers on the handout. (*3 minutes for the hare; 4 minutes for the tortoise*)
 - Tell the students to add the total minutes required to harvest their carrots and lettuce on their worksheets. (*7 minutes for the hare; 19 minutes for the tortoise*)
 - Ask the students how long it would take if the harvesting were divided in this way. (*It would take 19 minutes.*) In this case, the hare would be finished in just 7 minutes, but the task would not be completed until the tortoise finishes. So, this strategy would lead to a finishing time of 19 minutes.

4. Tell the student pairs to try other strategies (options), such as a 4-1 or 1-4 split. For each strategy, they should complete another row on their worksheets. Help them with the math where needed. Have the pairs report on the fastest strategy they were able to find. (*Most pairs should have discovered that the fastest strategy is to have the hare harvest all 5 heads of lettuce and to have the tortoise harvest all 5 carrots. Each would require 10 minutes to complete their individual harvesting, so the entire task would be completed by the team in*

10 minutes.) Explain that when people, or hares and tortoises in this case, put all their effort into doing or producing one thing, it is called **specialization**. Discuss the following:

- Who should specialize in harvesting heads of lettuce? (*The hare*)
- Who should specialize in harvesting carrots? (*The tortoise*)
- If the hare and tortoise had specialized in the other product, how much time would have been required? (*Some pairs may have tried this option. It would take the tortoise 25 minutes to harvest 5 heads of lettuce; it would take the hare 5 minutes to harvest 5 carrots. Thus, the team would have finished in 25 minutes.*)
- Do the hare and tortoise minimize the amount of time required by specializing, regardless of which each specializes in? (*No, the amount of time is minimized only when the hare specializes in harvesting lettuce and the tortoise specializes in harvesting carrots.*)

5. Point out that there is a way to determine what each should specialize in besides using a trial-and-error process as they did on their worksheets. Explain that specialization should occur when there is a comparative advantage. **Comparative advantage** is the ability to do something at a lower opportunity cost than someone else. **Opportunity cost** is the value of the next-best alternative when a decision is made; it's what is given up. Discuss the following:

- For every head of lettuce that the hare decides to harvest, how many carrots will she be unable to harvest? (*She gives up 2 carrots because each head of lettuce takes the hare 2 minutes to harvest. In 2 minutes, she could have harvested 2 carrots. Therefore, the opportunity cost of harvesting 1 head of lettuce is 2 harvested carrots.*)
- What is the opportunity cost of harvesting a head of lettuce for the tortoise? (*He gives up 2½ carrots because it takes 2 minutes for each carrot.*)
- Who has the lower opportunity cost of harvesting a head of lettuce? (*The hare has the lower opportunity cost because she only gives up 2 carrots, but the tortoise gives up 2½.*)
- Who has the comparative advantage (i.e., the lower opportunity cost) in harvesting lettuce? (*The hare*)
- For every carrot that the hare decides to harvest, how many heads of lettuce will she give up? (*She gives up one-half of a head of lettuce because it takes 1 minute to harvest a carrot and 2 minutes to harvest lettuce. Therefore, 1 minute would only allow her to complete half the harvesting of a head of lettuce.*)
- What is the opportunity cost of harvesting a carrot for the tortoise? (*Two-fifths of a head of lettuce*)
- Who has the lower opportunity cost of harvesting a carrot? (*The tortoise has the lower opportunity cost because he only gives up two-fifths of a head of lettuce, but the hare must give up one-half of a head of lettuce. If necessary, remind the students that one-half is greater than two-fifths.*)
- Who has the comparative advantage (i.e., the lower opportunity cost) in harvesting carrots? (*The tortoise*)

6. Emphasize that when the hare and the tortoise specialize in doing things in which they have a comparative advantage, they're able to produce a given amount of carrots and lettuce in the shortest amount of time. That is, when they specialize in what they do best (where they have the lowest opportunity cost), they can do better.
7. Refer the students to the Handout 3-2 headings "Hare Worksheet" and "Tortoise Worksheet." Have them replace the word "Hare" with "Canada" and "Tortoise" with "U.S." In the lines below the headings, have them replace the words "head of lettuce" with "ton of leather," "carrot" with "car," "minutes" with "hours of labor," and "harvest" with "produce." Tell them to change the wording in the tables of the worksheet accordingly. Ask them to identify who should specialize in each product. (*The U.S. should specialize in car production, while Canada should specialize in leather production.*) Explain that when the U.S. specializes in car production and Canada specializes in leather production, the least amount of labor time, and labor resources, to produce the total output is used. The two countries could then trade with each other to get the amount of each good they desire. (See Lesson 5.)

Closure

8. Discuss the following to emphasize the major points of the lesson:
 - What is specialization? (*When people put all their effort into doing or producing one thing*)
 - What is the opportunity cost of doing something? (*The value of the next-best alternative when a decision is made; it's what is given up. It is the most valuable alternative that could have been done.*)
 - What would be the opportunity cost of going to a movie? (*The next-best thing you could have done with your time and the next-best thing you could have spent your money on*)
 - If someone has a comparative advantage in doing something, what does that mean? (*It means his or her opportunity cost of doing it is lower than everyone else's.*)
 - Why is it desirable for people to specialize in things in which they have a comparative advantage? (*Things will be produced in the least costly way.*)

Assessment

9. Distribute a copy of *Handout 3-3: Assessment*. Allow time for the students to work and then review the answers as follows:

Multiple Choice

- Justin has three choices of what to do for the next hour—skateboard, read, or clean his room. He likes skateboarding most, reading next, and cleaning his room least. So, he decides to go skateboarding. What is the opportunity cost of his decision?
 - Reading
 - Cleaning his room
 - Reading and cleaning his room
 - Wear and tear on his skateboard
- LaTanya's opportunity cost of washing 1 plate is washing 1 glass. Tyler's opportunity cost of washing 1 plate is 2 glasses. Who has the comparative advantage in washing plates?
 - LaTanya
 - Tyler
- If the U.S. has a comparative advantage in producing computers, it should
 - import computers from other countries.
 - specialize in producing other goods.
 - specialize in producing computers.*
 - not produce computers.

Short Answer

Check students' worksheets for accuracy.

Students should recognize that because of the change in the tortoise's opportunity costs, he now has the comparative advantage in lettuce harvesting, and the hare has the comparative advantage in carrot harvesting. This implies that the tortoise should now specialize in lettuce harvesting and the hare should specialize in carrot harvesting. However, it should be noted that it would take the hare 5 minutes to harvest all 5 carrots, while it would take the tortoise 15 minutes to harvest 5 heads of lettuce (5 x 3 minutes each). Thus, if they strictly specialize, it will take 15 minutes to complete the task, but the hare would be doing nothing for 10 minutes! Clearly, once the hare has reached the goal of 5 carrots, she could then start helping the tortoise by harvesting lettuce. The fastest time can be achieved by having the hare harvest 5 carrots and 2 heads of lettuce, which takes 9 minutes. The tortoise, then, specializes in harvesting 3 heads of lettuce, which also takes 9 minutes.

NOTE: While the best result is still found by considering who has the comparative advantage and specializing accordingly, strict specialization by both producers may not be best. This helps explain why some countries may produce goods in which they do not have a comparative advantage, such as the hare is doing in this example.

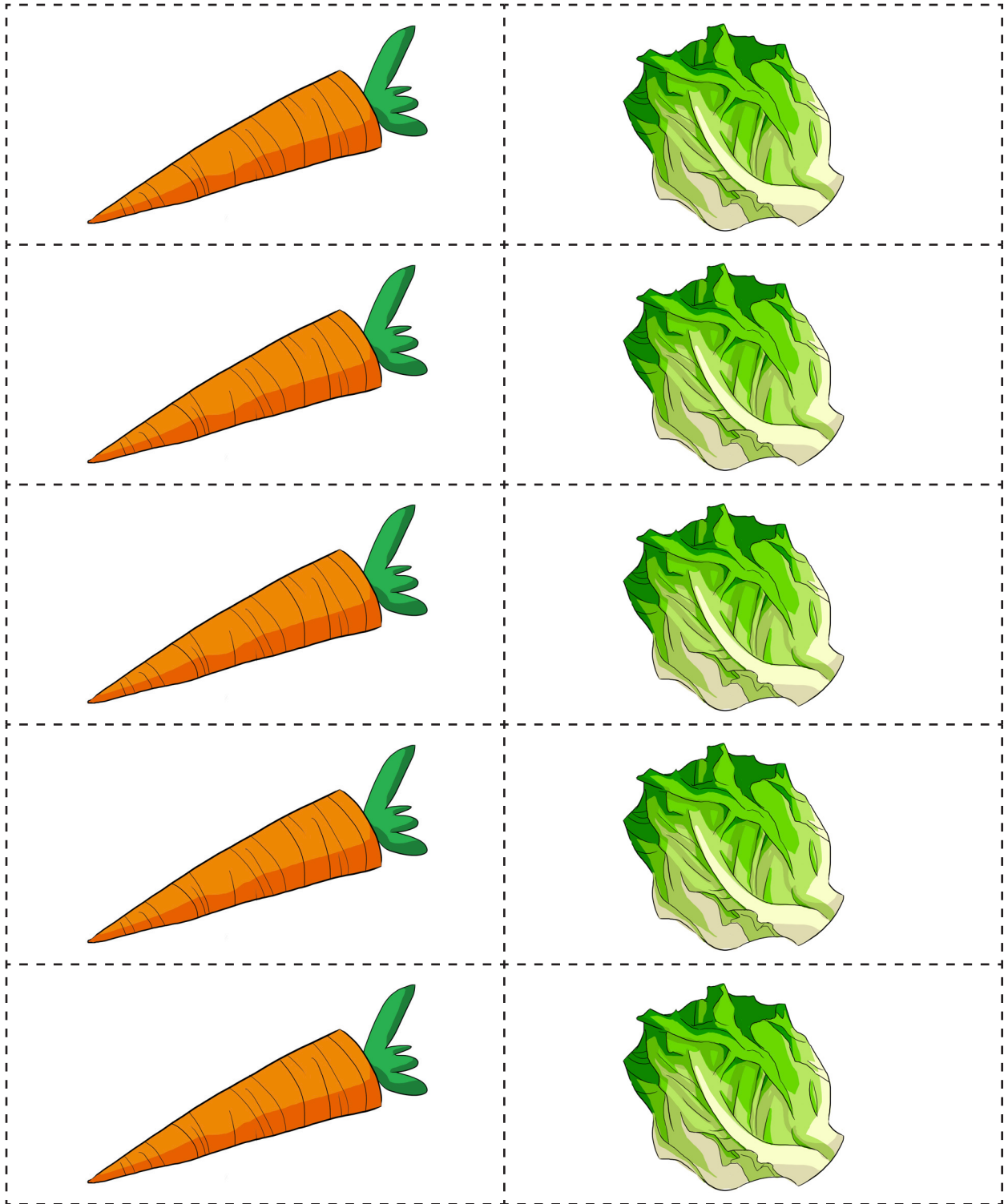
Visual 3-1: The Big Harvesting Event

It has been a year since the big race between the wise tortoise and the speedy hare. In the Meadow Olympics this year, they have decided to team up in the Big Harvesting Event. This event has teams of two harvest **5** carrots and **5** heads of lettuce as fast as they can. The team that does this in the shortest amount of time wins.

The hare and the tortoise have been practicing for months. The speedy hare can harvest **1** carrot in about **1** minute, while the tortoise needs **2** minutes. The hare is also faster at harvesting lettuce. She takes **2** minutes to harvest each head, while the tortoise takes **5** minutes.

They must decide the best strategy to use during the event. That is, how many carrots and heads of lettuce should each of them harvest? The hare says she should harvest everything because she is so much faster. The wise tortoise does not think this would be a good strategy.

Handout 3-1: Carrot and Lettuce Cards



Handout 3-2: Harvesting Times

Directions: Using the times provided below, find the fastest way to divide the task of harvesting 5 carrots and 5 heads of lettuce.

Hare Worksheet					
One head of lettuce takes 2 minutes to harvest. One carrot takes 1 minute to harvest.					
(1) Option number	(2) Number of heads of lettuce	(3) Total minutes to harvest lettuce (2) x 2 minutes	(4) Number of carrots	(5) Total minutes to harvest carrots (4) x 1 minute	(6) Total minutes required (3) + (5)
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes

Directions: Using the times provided below, find the fastest way to divide the task of harvesting 5 carrots and 5 heads of lettuce.

Tortoise Worksheet					
One head of lettuce takes 5 minutes to harvest. One carrot takes 2 minutes to harvest.					
(1) Option number	(2) Number of heads of lettuce	(3) Total minutes to harvest lettuce (2) x 5 minutes	(4) Number of carrots	(5) Total minutes to harvest carrots (4) x 2 minutes	(6) Total minutes required (3) + (5)
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes

Handout 3-3: Assessment (page 1 of 2)

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. Justin has three choices of what to do for the next hour—skateboard, read, or clean his room. He likes skateboarding most, reading next, and cleaning his room least. So, he decides to go skateboarding. What is the opportunity cost of his decision?
 - a. Reading
 - b. Cleaning his room
 - c. Reading and cleaning his room
 - d. Wear and tear on his skateboard

2. LaTanya’s opportunity cost of washing 1 plate is washing 1 glass. Tyler’s opportunity cost of washing 1 plate is 2 glasses. Who has the comparative advantage in washing plates?
 - a. LaTanya
 - b. Tyler

3. If the U.S. has a comparative advantage in producing computers, it should
 - a. import computers from other countries.
 - b. specialize in producing other goods.
 - c. specialize in producing computers.
 - d. not produce computers.

Handout 3-3: Assessment (page 2 of 2)

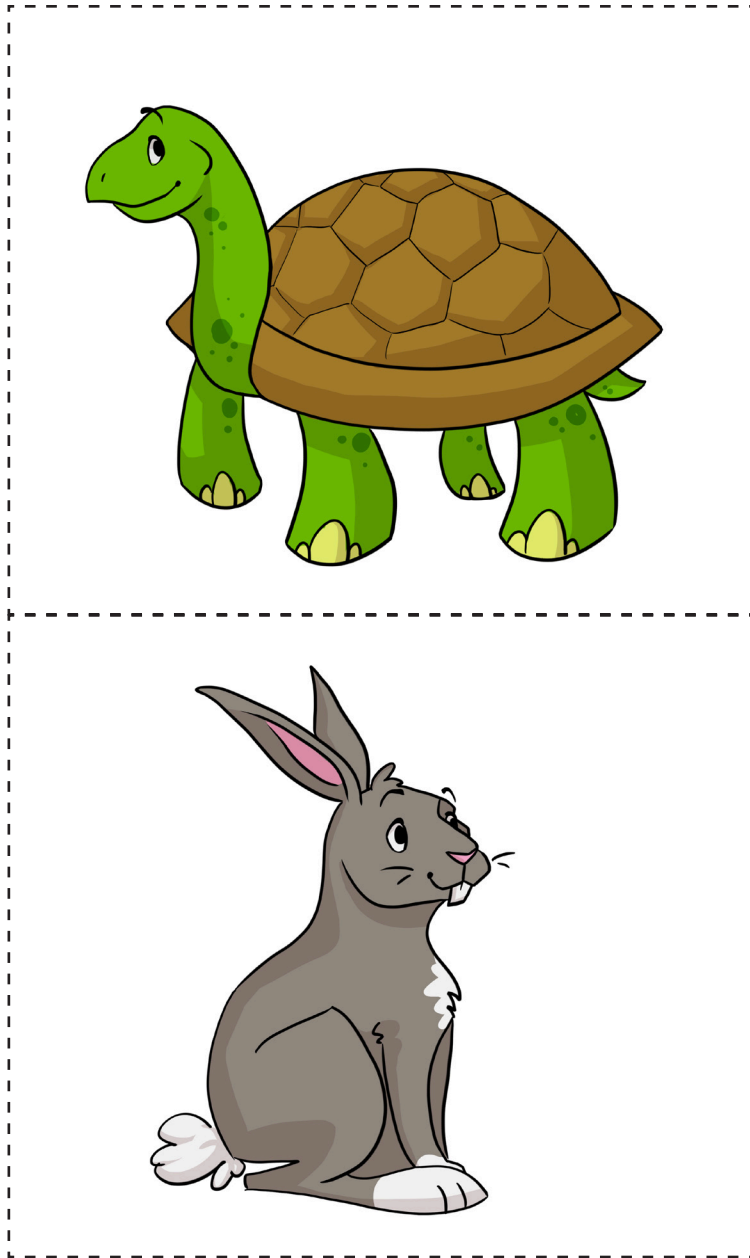
Short Answer

Directions: Using the times provided below, find the fastest way to divide the task of harvesting 5 carrots and 5 heads of lettuce.

Hare Worksheet					
One head of lettuce takes 2 minutes to harvest. One carrot takes 1 minute to harvest.					
(1) Option number	(2) Number of heads of lettuce	(3) Total minutes to harvest lettuce (2) x 2 minutes	(4) Number of carrots	(5) Total minutes to harvest carrots (4) x 1 minute	(6) Total minutes required (3) + (5)
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes

Tortoise Worksheet					
One head of lettuce takes 3 minutes to harvest. One carrot takes 2 minutes to harvest.					
(1) Option number	(2) Number of heads of lettuce	(3) Total minutes to harvest lettuce (2) x 3 minutes	(4) Number of carrots	(5) Total minutes to harvest carrots (4) x 2 minutes	(6) Total minutes required (3) + (5)
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes
		minutes		minutes	minutes

Handout 3-4: Tortoise and Hare Illustrations



Standards and Benchmarks

National Content Standards in Economics

Standard 1: Scarcity

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

- **Benchmark: Grade 4**

5. The opportunity cost of an activity is the value of the best alternative that would have been chosen instead. It includes what would have been done with the money spent and the time and other resources used in undertaking the activity.

Standard 6: Specialization

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

- **Benchmarks: Grade 4**

1. Economic specialization occurs when people concentrate their production on fewer varieties of goods and services than they consume.
4. Greater specialization leads to increasing interdependence among producers and consumers.

- **Benchmark: Grade 8**

2. Like trade among individuals within one country, international trade promotes specialization and division of labor and increases the productivity of labor, output, and consumption.

- **Benchmarks: Grade 12**

1. Individuals and nations have a comparative advantage in the production of goods or services, if they can produce a product at a lower opportunity cost than other individuals or nations.
2. International trade stems mainly from factors that confer comparative advantage, including international differences in the availability of productive resources and differences in relative prices.

A Yen to Trade

Lesson 4: Making Magic

Author

Curt Anderson, Ph.D., Professor Emeritus, University of Minnesota Duluth

Standards and Benchmarks (see page 4.14)

Lesson Description

Students read a story about how a boy and girl appear to use magic to solve a problem their village has. But all is not as it seems as their magic is revealed to be nothing more than good economics. Word games and a simple math exercise illustrate the benefits of trade.

Grade Level

6-8

Concepts

Goods
Production
Resources
Trade

Objectives

Students will be able to

- define goods, production, resources, and trade;
 - explain how goods can be produced in different ways;
 - describe trade as an alternative way to produce goods; and
 - explain how trade allows a country to get more goods from its resources.
-

Compelling Question

When is trade a better way to produce a good?

Time Required

45-60 minutes

Materials Required

- Visual 4-1, one copy for the teacher to display
 - Handouts 4-1, 4-2, 4-3, and 4-4, one copy of each for each student
-

Procedure

1. Begin by introducing or reviewing the following: **Goods** are objects that satisfy people's wants (e.g., pizzas, cars, toys, chairs). **Resources** are things that are used to produce goods and services. Resources include people (human resources), tools and machines (capital resources), and raw materials (natural resources). Tell the students that they will read a story about some goods and the resources used to produce them in a faraway land.
 2. Distribute a copy of *Handout 4-1: "The Magical Drink"* to each student. Have selected students read parts of the story aloud in class. (Optional: Have the students read the story as homework.) After reading the story, discuss the following:
 - What happened when it rained more than usual in Conn? (*The lakes became bigger; it became more difficult to gather swakkerberries; the villagers couldn't produce as much rade; and people drank less rade.*)
 - What good thing happened because of the rain? (*With larger lakes, fishermen could catch cort more easily because there were more cort than ever.*)
 - How did Cheeper and Special Eyes explain the rade they had? (*They explained that they made the rade from the extra cort their father caught.*)
 - Why did the elders want to speak with Cheeper and Special Eyes? (*They thought the children were using forbidden magic to make the rade.*)
 3. Explain that students will identify the secret of how to make rade out of cort. Distribute a copy of *Handout 4-2: Trading Letters* to each student. Have students complete it working in pairs. Review the answers as follows:
 - Task #1: CORT, CART, CARE, RARE, RATE, RADE (NOTE: One could go straight from rare to rade, but tell students that they need to find an extra word from the story that "fits" between RARE and RADE.)
 - Task #2: TRADE
 4. Explain that trade is another way of producing a good. **Trade** is the exchange of resources, goods or services for other goods or services, or for money. Trade involves using resources to produce one good that is exchanged for another good.
-

5. Display *Visual 4-1: Making Rade and Cort* and work through the following:
- Explain the process of producing rade...
 - ⊕ Villagers pick swakkerberries from the bushes around the lake.
 - ⊕ They squeeze the juice out of the berries into jugs.
 - ⊕ It takes two hours for a villager to find and pick enough swakkerberries for one jug of rade.
 - ⊕ It takes two hours for a villager to squeeze enough juice out of the swakkerberries for one jug of rade.
 - Explain the process of producing cort...
 - ⊕ Villagers catch the cort in the lake.
 - ⊕ They prepare a cort by cutting off parts, such as the tail and head, that they don't want to eat and washing the cort in clean water.
 - ⊕ It takes one hour for a villager to catch a cort.
 - ⊕ It takes one hour for a villager to prepare a cort.
6. Distribute a copy of *Handout 4-3: Making Swakkerade* to each student. Tell the students to complete the handout on their own or in groups of two or three. Review the answers as follows:
- Task #1: a1. 4; a2. 2; b. option 2; c. cheaper (Cheeper)
 - Task #2: Table values – 0, 0.5, 1, 1.5, 2; a. four cort; b. two jugs of rade; c. Special Eyes
 - Task #3: Table values – 0, 1, 2, 3, 4; a. one more jug of rade; b. two more jugs of rade; c. Ganes

Debrief the activity by discussing the following:

- What is the greatest amount of cort that Cheeper's father could produce in one 8-hour day? (*It takes two hours for each prepared cort, so he could produce up to four cort.*)
- If Cheeper's father produced three prepared cort, how many jugs of rade would he be able to make? (*Three cort would take six hours to produce. This would leave two hours to produce rade. It takes four hours to produce a jug of rade, so he would only be able to produce one-half of a jug in the two hours.*)
- How much does an extra jug of rade cost Cheeper's father? (*An extra jug of rade requires four hours of his time. In four hours, he could produce two cort. Therefore, the extra jug of rade costs him two cort.*)
- **Production** is the process of using resources and intermediate goods to make goods and provide services. If Cheeper's father specializes in cort production, he can produce four cort in a work day. If he does this and then trades two cort for two jugs of rade, how much cort and rade will he have to eat and drink? (*Two cort and two jugs of rade*)

- If he doesn't specialize and produces two cort, how many jugs of rade can he produce? *(One)*
- Is he better off to specialize and trade or produce both cort and rade? *(He's better off to specialize and trade because he'll have the same amount of cort and more rade.)*
- Why is rade cheaper when Cheeper's father specializes and trades? *(It's cheaper because he is using the same amount of resources and getting more goods. Or, he will use fewer resources to get the same amount.)*

Closure

7. Discuss the following to emphasize the major points of the lesson:
- What are goods? *(Objects that satisfy people's wants)*
 - Name the two main goods in the story. *(Rade, a drink; and cort, a fish)*
 - What are resources? *(Things that are used to produce goods and services)*
 - What resources were used to produce rade? *(Human resources: villagers' time spent gathering and squeezing; Capital resources: baskets and jugs; Natural resources: swakkerberries)*
 - What resources were used to produce cort? *(Human resources: villagers' time spent fishing and preparing; Capital resources: fishing equipment and cutting knives; Natural resources: cort)*
 - Describe how trade is another way to produce a good. *(It takes resources to produce a good. Then, that good is traded for another good.)*
 - When is trading a better way to produce a good? *(It is better when it is cheaper; that is, when it takes fewer resources to produce a good than it takes to produce the good for which it will be traded.)*

Assessment

8. Distribute a copy of *Handout 4-4: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. Americans trade corn for Japanese cars. What U.S. resources are used to get those cars?
 - a. Steel, auto workers, and car factories
 - b. Dollars
 - c. *Farmland, tractors, and farmers' time*
 - d. None, that's why trading is so good.

2. John specializes when he
 - a. decides to trade with other people.
 - b. *uses all his time making or doing one thing.*
 - c. does all those things that he does best.
 - d. uses resources to produce goods.

3. Trading for a good is a good idea
 - a. *when it takes less resources to trade than it does to produce the good.*
 - b. when it takes more resources to trade than it does to produce the good.
 - c. only when it takes no resources to produce the good.
 - d. only when you can't produce the good yourself.

Short Answer

4. You want to eat a delicious lunch at school. Describe at least three ways that you could achieve this.

Answers will vary but may include the following:

1. *Make a lunch that you really like at home and bring it to school.*
2. *Make a lunch at home and then trade items from it with your friends for items you like better.*
3. *Bring money from home and trade it with the school cafeteria for a lunch.*
4. *Bring money and exchange it for a friend's lunch.*

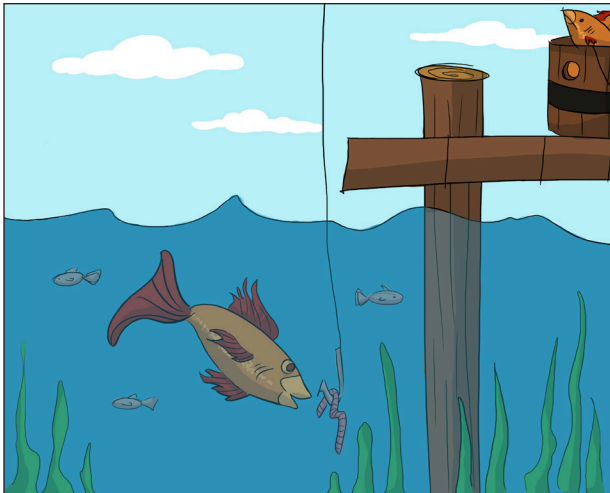
Visual 4-1: Making Rade and Cort



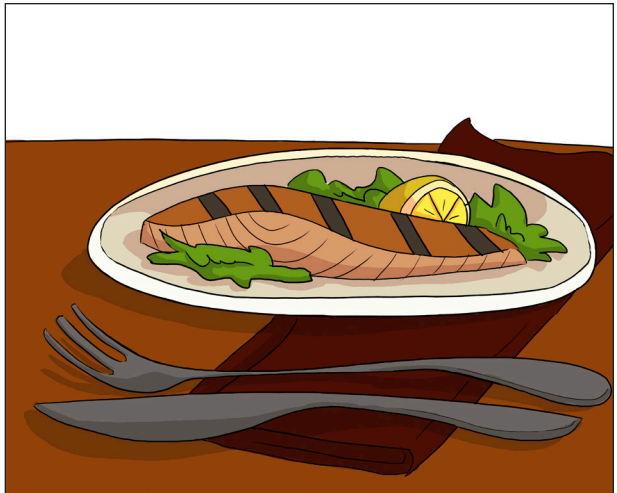
2 hours



2 hours



1 hour



1 hour

Handout 4-1: “The Magical Drink” (page 1 of 3)

This story takes place in a vast land of fine forests and lovely lakes. There are several villages spread throughout the land. Each village has its own way of doing things. In Cali, they eat breakfast in the evening and dinner in the morning. In Colo, they sleep during the day and work at night. In Conn, they greet each other by waving their feet. And, in Caro, they use numbers instead of words to talk. The elders of these villages often do not allow the people of their villages to go to any other villages because things are so different. They believe that their village does things in the best way.

Cheeper and Special Eyes live in the village of Conn. They are both over 70 years old, but they are considered children in their village. Cheeper got his name from the bird-like peeps and chirps he made as a baby. Special Eyes got her name from the beautiful color of her eyes—one as green as the ferns in the forest and the other as blue as the water in the lakes. Both children go to school in the morning. In the afternoon, they help their father, a fisherman, clean and prepare the cort fish he has caught. In the evening, the family meets with families from the rest of the village for a marvelous feast of cort, forest greens, bread, and a drink made from the swakkerberries that grow along the banks of nearby lakes. In the old days, the villagers called the drink swakkerade, but nowadays they just call it rade. Everyone shares what they have caught, grown, or made. There is always lots of eating, drinking, music, dancing, games, and storytelling. Everyone has a good time in Conn.

One spring, things started to change. It was very rainy in some parts of the forest, while almost no rain fell in other parts. Conn was in a rainy part. The lakes around it began to get bigger and bigger as the rain kept falling. Soon, most of the swakkerberry bushes around the lakes were under water. Villagers were not able to gather as many swakkerberries as before. The people of Conn who gathered the berries had to walk further and further from the village to find enough to make the rade that everyone enjoyed so much. Many times, they simply could not find enough. Everyone drank less rade. The cort and other food just didn’t taste as good any more. There was great sadness in the village.

Cheeper and Special Eyes saw the sadness in their family, even though their father had found his job of cort fishing easier. With the larger lakes, there was more room for the cort to grow, so there were more cort than ever before! He caught more cort than was necessary and stored them in a special cellar under his house.

“But what good was more cort without rade to go with it? If only rade could be made out of cort!” thought Cheeper and Special Eyes. They thought very hard about that and soon came up with a wonderful idea. But they knew they must keep it a secret.

A few days later at the evening feast, Cheeper and Special Eyes showed up pulling a small cart filled with jugs of rade. Everyone in the village was excited and happy! It was so wonderful having plenty of rade! But then some of the villagers began to ask the children how they were able to make the rade.

“Did you find more swakkerberry bushes? Would you show us where they are?” they asked.

Handout 4-1: “The Magical Drink” (page 2 of 3)

Cheeper replied, “Well, no, not really. We made this rade from the extra cort that our father caught.”

The villagers did not believe them. “That is not possible!” they said.

“But it is the truth!” cried Special Eyes.

“Show us how you do it then,” demanded some villagers.

“We can’t,” replied Special Eyes.

“Why not?” asked the villagers. “Are you using forbidden magic?”

“It’s not magic, but it is a secret that we must keep,” answered Cheeper.

Other villagers were just happy to have the rade. They didn’t care how it was done; they were just glad that the children made it. They convinced the others to stop asking the children so many questions and instead thank them for making such wonderful rade—even if it was made out of cort.

So, for the next few weeks, Cheeper and Special Eyes continued turning cort into rade. As each day passed, however, some village elders wondered more and more about how it was done—especially because none of the elders, the wisest of all, could figure out how to do it.

One afternoon, one of the elders was sent to spy on the children and learn their secret. Hiding behind a tree, he watched the children carry cort from their house, place them in their small cart, and go into the forest. The elder tried to follow them, but they moved very quickly. He soon had to sit down to rest and lost sight of them. He hadn’t rested long when suddenly he saw the children returning. In the cart, there were jugs of rade! They were moving more slowly, taking great care to make sure the jugs did not break. The elder hid until they had passed by. Then he went to tell the other elders what he had seen.

“Surely they do use magic,” he reported. “There is no other way they could have turned the cort into rade so quickly.”

The elders decided that they better get some answers from the children. Cheeper and Special Eyes were called into the Chamber of the Elders—a large, wooden lodge with beautiful wood carvings. The children didn’t notice the carvings because they were too nervous about what the elders would do. But they didn’t need to worry. The elders were chosen for not only their wisdom, but also their kindness.

And the kindest of them all, Ganes, spoke softly to them, “Please, tell us the secret of your rade that has brought so much happiness back to our village.”

Cheeper answered first, “Please understand that all we wished to do was to find a way to make rade out of Conn’s resources. With the rains, cort has become very abundant, but swakker-berries have become very rare.”

Handout 4-1: “The Magical Drink” (page 3 of 3)

“So, we loaded our cart with cort and went to villages on the other side of the forest,” Special Eyes continued. “We are sorry for going there against the wishes of the elders, but we wanted to help people in our village as well as people in the other villages.”

“How is that possible?” asked Ganes.

Cheeper said, “The village of Cali has plenty of healthy swakkerberry bushes but very few cort because their lake is small. They’re willing to give us a jug of rade for each cort. That rate of exchange seemed very good to us because it takes twice as long for us to make one jug of rade as it does to catch and prepare one cort.”

“For them, things are just the opposite. It takes twice as long to catch and prepare one cort as it takes to make one jug of rade. When we exchange, they’re able to get more cort, and we’re able to get more rade than we could by producing rade ourselves. Everyone is happy! We meant no harm,” said Special Eyes.

The elders whispered to one another and then gathered around Ganes to whisper some more. Soon they returned to their seats, and Ganes rose to speak.

“You have shown yourselves to be wiser than the elders. You have taught us that there is more than one way to make rade. You have discovered a way that uses less of our people’s time. What shall we call this new way of producing rade?”

“People in Cali call it *trade*,” said Special Eyes.

“This *trade* may not be magic, but it surely does work like magic,” said Ganes.

The elders of Conn began allowing their people to travel to the other villages to learn their ways and to trade. Everyone soon learned the magical power of trade, and they learned something else that Cheeper and Special Eyes had already discovered—the people in the other villages really weren’t that much different after all!

Handout 4-2: Trading Letters

Task #1

Cheeper and Special Eyes were able to change cort into rade. Your challenge in this task is to do the same. Change the word "cort" into the word "rade" by changing one letter at a time to form a new word. Each new word must be a word from the story. You must use four words from the story.

CORT

RADE

Task #2

Circle the new letter you added at each step in Task #1, from the first new word through the last word, "rade." Each time, old letters were traded away for these new letters! Use the five letters you circled to form a word that describes how Cheeper and Special Eyes were able to change cort into rade. Write that word below.

Handout 4-3: Making Swakkerade (page 1 of 2)

Task #1

- a. How many hours does it take to produce one jug of rade in the following two ways?
 - 1. Gather swakkerberries and squeeze out their juice: _____ hours
 - 2. Produce one cort and trade it for one jug of rade: _____ hours
- b. Which way takes less time, 1 or 2? _____
- c. The way of making rade that takes the least amount of time is the one that costs less. If one way of doing something costs less than another, what word could we use to describe it that sounds like the name of a character in the story? _____

Task #2

Cheeper’s father has eight hours a day to make rade or cort or a little of both. In the table below, enter the most rade that he could make each day if he also made the amount of cort shown.

Amount of cort per day	Amount of rade per day
4	
3	
2	
1	
0	

If people use all their time making one thing, they specialize in making that thing. If Cheeper’s father uses all his time fishing and preparing cort, he specializes in producing cort.

- a. How much cort could he make each day if he specialized in producing cort? _____
- b. How much rade could he make each day if he specialized in making rade? _____
- c. What character in the story has a name that sounds like specialize? _____

Handout 4-3: Making Swakkerade (page 2 of 2)

Task #3

Suppose that Cheeper's father specializes and spends eight hours a day catching and preparing cort as he did in the story. Suppose that he, like his children, is able to trade one cort for one jug of rade. Fill in the table below to show the different combinations of cort and rade that he could have after producing cort and then making trades.

Amount of cort he keeps after trading	Amount of rade he could have
4	
3	
2	
1	
0	

Compare this table to the table in Task #2.

- How much extra rade can he get from specializing and trading if he wants 2 cort? _____
- How much extra rade can he get from specializing and trading if he wants 0 cort? _____
- The *extra* amount of goods that traders are able to get from trade is called the "gains" from trade. Which character in the story has a name that sounds like that? _____

Handout 4-4: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. Americans trade corn for Japanese cars. What U.S. resources are used to get those cars?
 - a. Steel, auto workers, and car factories
 - b. Dollars
 - c. Farmland, tractors, and farmers' time
 - d. None, that's why trading is so good.

2. John specializes when he
 - a. decides to trade with other people.
 - b. uses all his time making or doing one thing.
 - c. does all those things that he does best.
 - d. uses resources to produce goods.

3. Trading for a good is a good idea
 - a. when it takes less resources to trade than it does to produce the good.
 - b. when it takes more resources to trade than it does to produce the good.
 - c. only when it takes no resources to produce the good.
 - d. only when you can't produce the good yourself.

Short Answer

Directions: Answer the following question using complete sentences.

4. You want to eat a delicious lunch at school. Describe at least three ways that you could achieve this.

Standards and Benchmarks

National Content Standards in Economics

Standard 1: Scarcity

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

- **Benchmark: Grade 4**

6. Productive resources are the natural resources, human resources, and capital goods available to make goods and services.

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 4**

1. Exchange is trading goods and services with people for other goods and services (called barter) or for money.
3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more information exchanges of favors and courtesies.

Standard 6: Specialization

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

- **Benchmarks: Grade 4**

1. Economic specialization occurs when people concentrate their production on fewer varieties of goods and services than they consume.
3. Specialization and division of labor usually increase the productivity of workers.
4. Greater specialization leads to increasing interdependence among producers and consumers.

A Yen to Trade

Lesson 5: Tricks of the Trade

Author

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Standards and Benchmarks (see page 5.19)

Lesson Description

Students play the role of citizens of two fictional countries who make and love to eat pies and brownies. They face choices because of limited time and oven space. They investigate how these choices would change if they were allowed to trade with each other. They see that, through trade, everyone can get more pies and brownies.

Grade Level

6-8

Concepts

Capital resources
Goods
Human resources
Intermediate goods
Natural resources
Opportunity cost
Production

Objectives

Students will be able to

- define capital resources, goods, human resources, intermediate goods, natural resources, opportunity cost, and production;
 - explain that people use natural, human, and capital resources along with intermediate goods to produce other goods and services;
-

- explain why limited resources restrict what can be produced;
 - determine what is possible to produce from a given amount of resources;
 - determine the opportunity cost of producing a good; and
 - explain how trade can increase the amount of goods a country can get from its scarce resources.
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Compelling Question

How can people consume more of a good than they can produce themselves?

Time Required

60-90 minutes

Materials Required

- Visual 5-1, one copy for the teacher to display
 - Handout 5-1, one copy for each student in half of the class
 - Handout 5-2, one copy for each student in the other half of the class
 - Handout 5-3, one copy for each student with Handout 5-1
 - Handout 5-4, one copy for each student with Handout 5-2
 - Handout 5-5, one copy for each student
 - Scissors and glue for each student
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Procedure

1. Define **goods** as objects that satisfy people's wants. Ask the students to give some examples. (*Answers may include pizzas, cars, homes, bicycles, candy, toys, furniture, computers, or cell phones.*)
 2. Explain that people combine natural, human, and capital resources with intermediate goods to produce consumer goods. **Natural resources** are things that occur naturally in or on the earth. Examples include water, oil, and trees. **Human resources** are people who work. Examples include assembly-line workers, managers, designers, and engineers. **Capital resources** are things produced by people and used over and over to produce other goods and services. Examples include assembly lines, computers, machines, buildings, tools, and robots. Resources are combined with **intermediate goods**—things that are produced and that become part of another product. Examples include aluminum, steel, rubber, thread, cloth, and flour. **Production** is the process of using resources and intermediate goods to produce consumer goods and services.
-

3. Ask the students to identify the resources and intermediate goods that might be used for pizza production. (*Answers may include flour, yeast, tomato sauce, cheese, pepperoni slices, someone to make the dough and put on the toppings, an oven, a pizza pan, or electricity.*)
4. Discuss the following to prepare students for the lesson activities:
 - Why doesn't everyone in the United States have two new cars, a big-screen TV, a large house, and all the pizza they can eat? (*Students are likely to answer that not everyone in the United States has enough money or that people can't afford it.*) Remind students that the production of goods and services requires resources. Even though the United States has a tremendous amount of resources, there are still not enough to produce all the goods that people want.
 - How can people in a country get more goods if resources are limited? Let students brainstorm. (*Answers will vary but may include by finding or making more resources or finding better ways of making goods and services that use fewer resources.*)
5. Tell the students that there is another way to get goods if resources are limited. To continue the lesson, divide the class in half, explaining that half of the class will play the role of Terrans from the country of Terra. The other half will play the role of Aquans from the country of Aqua. Distribute a copy of *Handout 5-1: Terran Production Cards* to each Terran and a copy of *Handout 5-2: Aquan Production Cards* to each Aquan. Have them cut out and glue their production cards as described on the handouts.
6. When students have finished cutting out their cards, distribute a copy of *Handout 5-3: Terran Worksheet* to each Terran and a copy of *Handout 5-4: Aquan Worksheet* to each Aquan. Instruct the students to complete Task #1 on their handout and then discuss the following:
 - Terrans, if you produced 8 pies, how many pans of brownies could you produce? (*0 pans*)
7 pies? (*½ pan*) 6 pies? (*1 pan*) 5 pies? (*1½ pans*) 4 pies? (*2 pans*) 3 pies? (*2½ pans*)
2 pies? (*3 pans*) 1 pie? (*3½ pans*) 0 pies? (*4 pans*)
 - Aquans, if you produced 6 pans of brownies, how many pies could you produce? (*0 pies*)
5 pans? (*½ pie*) 4 pans? (*1 pie*) 3 pans? (*1½ pies*) 2 pans? (*2 pies*) 1 pan? (*2½ pies*)
0 pans? (*3 pies*)
7. Instruct the students to complete Task #2 on their handout and then discuss the following:
 - Terrans, which combinations of pies and pans of brownies are possible for you to produce in the time allotted? (*a. 4 pies and 2 pans; b. 2 pies and 3 pans; e. 2 pies and 2 pans; g. 0 pies and 4 pans*)
 - Terrans, which combinations of pies and pans of brownies are *not* possible for you to produce in the time allotted? (*c. 4 pies and 4 pans; d. 6 pies and 2 pans; f. 9 pies and 0 pans; h. 2 pies and 6 pans*)

- Aquans, which combinations of pans of brownies and pies are possible for you to produce in the time allotted? (a. 2 pans and 2 pies; d. 0 pans and 3 pies; e. 4 pans and 1 pie; g. 1 pan and 2 pies)
 - Aquans, which combinations of pans of brownies and pies are *not* possible for you to produce in the time allotted? (b. 7 pans and 0 pies; c. 2 pans and 4 pies; f. 1 pan and 5 pies; h. 5 pans and 1 pie)
 - Aquans and Terrans, what happens to the amount of pies you can make as the number of pans of brownies you make increases? (*It decreases.*) Why? (*Because bakers, ovens, and other resources used to make brownies and pies are limited; as more pies are made, there are fewer resources available for making brownies.*)
8. Explain that **opportunity cost** is the value of the next-best alternative when a decision is made. So the opportunity cost of doing something is what must be given up to do it. In this case, the opportunity cost of making extra pies is the number of pans of brownies that are given up because they cannot be produced. Instruct the students to complete Task #3 on their handout and display *Visual 5-1: Pie and Pan Production*.
- Discuss the following about Task #3 with the Terrans:
 - If you produced 1 extra pie, what is the opportunity cost—how many pans of brownies do you give up? (*½ pan of brownies*)
 - If you produced an extra ½ pan of brownies, what is the opportunity cost—how many pies do you give up? (*1 pie*)
 - If you produced 1 extra pan of brownies, what is the opportunity cost—how many pies do you give up? (*2 pies*)
 - Discuss the following about Task #3 with the Aquans:
 - If you produced an extra ½ pie, what is the opportunity cost—how many pans of brownies do you give up? (*1 pan of brownies*)
 - If you produced 1 extra pie, what is the opportunity cost—how many pans of brownies do you give up? (*2 pans of brownies*)
 - If you produced 1 extra pan of brownies, what is the opportunity cost—how many pies do you give up? (*½ pie*)
9. Instruct the students to complete Task #4 on their handout and then discuss the following:
- Terrans, are you able to meet your desire for 4 pies and 4 pans of brownies to make it through the day by producing this combination? Why or why not? (*No, this combination isn't possible with the amount of resources available.*)
 - Aquans, are you able to meet your desire for 2 pans of brownies and 4 pies to make it through the day by producing this combination? Why or why not? (*No, this combination is not possible with the amount of resources available.*)
 - According to Task #4, what is one way you could get what you want? (*Trade*)

- Discuss the following about Task #4 with the Terrans:
 - When you produce 1 pan of brownies, how many pies do you give up? (*2 pies*)
 - If someone offered to trade 1 pan of brownies for 1 pie, would you be better or worse off than if you made brownies yourself? Why? (*We would be better off because we'd only give up 1 pie for 1 pan of brownies. If we made 1 pan of brownies, we'd give up 2 pies.*)
 - If someone offered to trade 1 pan of brownies for 2 pies, would you be better or worse off than if you made brownies yourself? Why? (*Neither. In this case, we'd give up 2 pies for 1 pan of brownies whether we traded or made brownies.*)
 - If someone offered to trade 1 pan of brownies for 3 pies, would you be better or worse off than if you made brownies yourself? Why? (*We would be worse off because we'd give up 3 pies to get 1 pan of brownies. If we made brownies ourselves, we'd only give up 2 pies.*)
- Discuss the following about Task #4 with the Aquans:
 - When you produce 1 pie, how many pans of brownies do you give up? (*2 pans of brownies*)
 - If someone offered to trade 1 pie for 1 pan of brownies, would you be better or worse off than if you made pies yourself? Why? (*We would be better off because we'd only give up 1 pan of brownies for 1 pie. If we made 1 pie, we'd give up 2 pans of brownies.*)
 - If someone offered to trade 1 pie for 2 pans of brownies, would you be better or worse off than if you made pies yourself? Why? (*Neither. In this case, we'd give up 2 pans of brownies for 1 pie whether we traded or made pies.*)
 - If someone offered to trade 1 pie for 3 pans of brownies, would you be better or worse off than if you made pies yourself? Why? (*We would be worse off because we'd give up 3 pans of brownies for 1 pie. If we made pies ourselves, we'd only give up 2 pans of brownies.*)

10. Tell the students they have 5-10 minutes to trade with anyone in the room—Terran or Aquan—to try and meet their goal from Task #4. Explain that if they are able to find an acceptable trade, they must put a checkmark on the side of the production card showing which good(s) they've received in a trade. When they return to their seats, those cards with checkmarks must be placed on the desk with the checked side up.

NOTE: The production cards show the trade-off between pies and brownies. This trade-off is only possible in the producing country. Once a good—pie or pan of brownies—has been produced and traded, it cannot be converted into the other good.

11. When students have finished trading, they should return to their seats and place their cards on their desks to show the combination of pies and brownies they now have.

- Discuss the following with the Terrans:
 - How many Terrans now have 4 pies and 4 pans of brownies? (*Answers will vary depending on trades made.*)
 - How were you able to get this combination of pies and pans of brownies when you couldn't produce it? (*By trading*)
 - With whom did you trade? (*An Aquan*)
 - Why were you willing to trade? (*Could get more pies and brownies than without trade*)
 - How many pies did you trade for 1 pan of brownies? (*Answers will vary, but the most likely trading terms are 1 pie for 1 pan of brownies.*)
 - Why was this a good trade for you? (*Through trade, we gave up 1 pie for 1 pan of brownies. When producing brownies, we give up 2 pies for 1 pan of brownies. The opportunity cost of brownies—number of pies given up—was lower with trade than without.*)
- Discuss the following with the Aquans:
 - How many Aquans now have 2 pans of brownies and 4 pies? (*Answers will vary depending on trades made.*)
 - How were you able to get this combination of pans of brownies and pies when you couldn't produce it? (*By trading*)
 - With whom did you trade? (*A Terran*)
 - Why were you willing to trade? (*Could get more brownies and pies than without trade*)
 - How many pans of brownies did you trade for 1 pie? (*Answers will vary, but the most likely trading terms are 1 pan of brownies for 1 pie.*)
 - Why was this a good trade for you? (*Through trade, we gave up 1 pan of brownies for 1 pie. When producing pies, we give up 2 pans of brownies for 1 pie. The opportunity cost of pies—number of pans of brownies given up—was lower with trade than without.*)

12. Instruct the students to complete Task #5 and then discuss the following:

- Terrans, in what should you specialize? (*Pies*)
- Aquans, in what should you specialize? (*Brownies*)
- Terrans, give an example of a combination of pies and pans of brownies that you can have with trade that you couldn't have without trade. (*c. 4 pies and 4 pans; d. 6 pies and 2 pans; h. 2 pies and 6 pans*)
- Aquans, give an example of a combination of pans of brownies and pies that you can have with trade that you couldn't have without trade. (*c. 2 pans and 4 pies; f. 1 pan and 5 pies; h. 5 pans and 1 pie*)

- Why are Terrans and Aquans better off as a result of trade? (*Both groups can consume more than they could without trade.*)
- Give an example that shows Terrans and Aquans can consume more with trade. (*Answers will vary but may include the following: Aquans could consume 5 pans and ½ pie without trade. With trade they can consume 5 pans and 1 pie. Terrans could consume 5 pies and ½ pan without trade. With trade they can consume 7 pies and 1 pan.*)

Closure

13. Discuss the following to emphasize the major points of the lesson:

- What are goods? (*Objects that satisfy people's wants*)
- How are goods produced? (*By using natural, human, and capital resources along with intermediate goods*)
- Why can't people produce as many goods as they want? (*The resources needed to produce them are limited or scarce.*)
- If resources are limited, then what does producing more of any good mean? (*Producing less of other goods*)
- What do we call those goods that must be given up? (*Opportunity cost*)
- Suppose you have enough resources and intermediate goods to produce 3 dozen chocolate chip cookies or 1 dozen chocolate chip muffins in an hour. If you choose to produce the cookies, what is your opportunity cost? (*1 dozen chocolate chip muffins*)
- When would it be better for people in a country to trade for a good rather than produce the good themselves? (*When trading for the good is less costly; that is, when people give up fewer goods in trading for the desired product than what they give up if they produced the product themselves*)

Assessment

14. Distribute a copy of *Handout 5-5: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. The total amount of goods that a country is able to produce is limited by
 - a. its government.
 - b. the amount of money its people have.
 - c. *the amount of resources its people have.*
 - d. the amount of goods its people want.

2. The people of Eurostan can produce 1,000 cars and 500 trucks per year if they use all of the available resources. If they produce 1,200 cars, they can only produce 400 trucks. The opportunity cost of the additional 200 cars is
 - a. 100 trucks.
 - b. 200 trucks.
 - c. \$400,000.
 - d. \$200,000.



3. It's better for people in a country to trade for a good than to produce the good if the opportunity cost of producing it is
 - a. low overall.
 - b. high overall.
 - c. lower than the cost of trading.
 - d. higher than the cost of trading.

Short Answer



4. How can people consume more of a good than they are able to produce themselves?
People can consume more of a good than they are able to produce themselves by specializing and trading.

Visual 5-1: Pie and Pan Production

Terran Production

	8	7	6	5	4	3	2	1	0
	0	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4

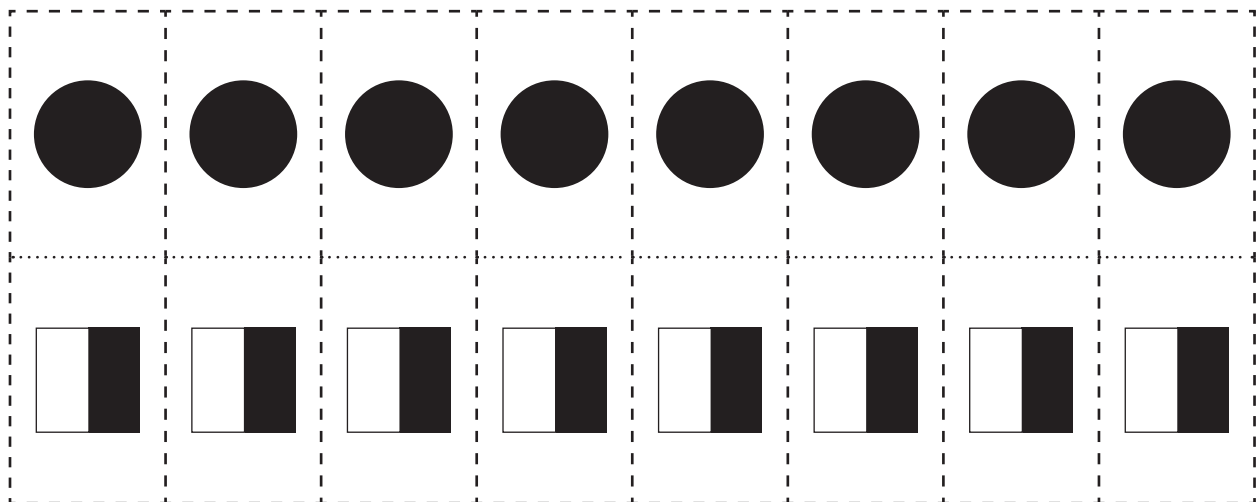
Aquan Production

	6	5	4	3	2	1	0
	0	1/2	1	1 1/2	2	2 1/2	3

Handout 5-1: Terran Production Cards

You live in Terra. Like most other Terrans, you like pies and brownies. The more pies and brownies you can get, the happier you are. Unfortunately, making these takes time, and you only have a small oven that can hold only 1 pie or 1 pan of brownies at a time. In 1 hour, you are able to produce either 1 pie or $\frac{1}{2}$ pan of brownies at a time (but not both). You only have 8 hours available to make pies and brownies.

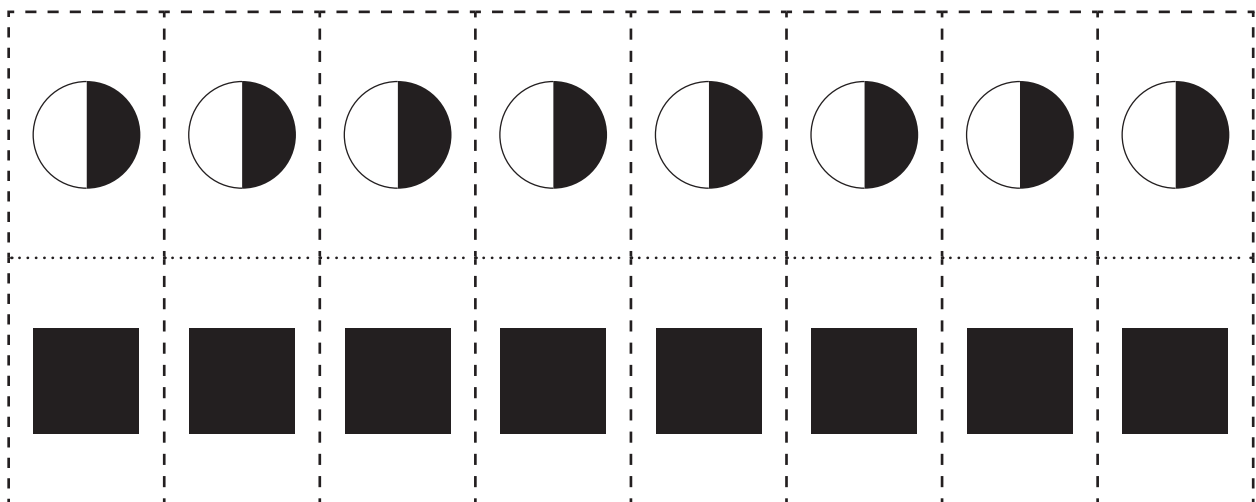
Cut out the table below, then fold the table in half horizontally along the dotted line. Glue the folded table together so that the circles and squares are facing out. Next, cut along the vertical dashed lines. This will give you 8 production cards. Each card shows what you can produce in 1 hour. The circles represent pies and the squares represent pans of brownies. Whichever side is up (facing you) shows what you are producing in that particular hour.



Handout 5-2: Aquan Production Cards

You live in Aqua. Like most other Aquans, you like pies and brownies. The more pies and brownies you can get, the happier you are. Unfortunately, making these takes time, and you only have a small oven that can hold only 1 pie or 1 pan of brownies at a time. In 1 hour, you are able to produce either $\frac{1}{2}$ pie at a time or 1 pan of brownies (but not both). You only have 8 hours available to make pies and brownies.




Cut out the table below, then fold the table in half horizontally along the dotted line. Glue the folded table together so that the circles and squares are facing out. Next, cut along the vertical dashed lines. This will give you 8 production cards. Each card shows what you can produce in 1 hour. The circles represent pies and the squares represent pans of brownies. Whichever side is up (facing you) shows what you are producing in that particular hour.



Handout 5-3: Terran Worksheet (page 1 of 3)

Task #1: Production

1. Turn your production cards so that every hour is spent making pies.
2. What is the total amount of pies you could produce? _____
3. If you produced that total, how many pans of brownies could you produce? _____
4. Enter this number below the "8" in the table below.
5. Turn over *one* of your production cards so that now 1 hour is spent making brownies.
6. Now you can produce _____ pies and _____ pans of brownies. Write the number of pans of brownies below the "7" in the table.
7. Continue turning over the other production cards, one at a time. Each time you turn over a card, in the table write the largest amount of pans of brownies that you can produce with that amount of pie production.

	8	7	6	5	4	3	2	1	0
									
 Trade									

Task #2: Production Possibilities

Put a checkmark ✓ next to the combinations of pies and pans of brownies below that are possible for you to produce in 8 hours. Put an X next to the combinations of pies and pans of brownies below that are *not* possible for you to produce in 8 hours. You may use your cards or the table above to decide.

- | | |
|----------------------------|----------------------------|
| a. 4 pies and 2 pans _____ | e. 2 pies and 2 pans _____ |
| b. 2 pies and 3 pans _____ | f. 9 pies and 0 pans _____ |
| c. 4 pies and 4 pans _____ | g. 0 pies and 4 pans _____ |
| d. 6 pies and 2 pans _____ | h. 2 pies and 6 pans _____ |

Handout 5-3: Terran Worksheet (page 2 of 3)

Task #3: Opportunity Cost

The opportunity cost of doing something is what must be given up to do it. Using the table from Task #1, answer the following questions:

1. If you produced 1 extra pie, what is the opportunity cost—how many pans of brownies do you give up? _____
2. If you produced an extra $\frac{1}{2}$ pan of brownies, what is the opportunity cost—how many pies do you give up? _____
3. If you produced 1 extra pan of brownies, what is the opportunity cost—how many pies do you give up? _____
4. For every extra pie you produce, the opportunity cost is _____ pans of brownies.
5. For every extra pan of brownies you produce, the opportunity cost is _____ pies.

Task #4: Trading

Suppose you decide that you absolutely must have 4 pies and 4 pans of brownies to make it through the day. Can you produce this combination? _____

You can try to achieve this combination through trade. How will you know whether to trade? You have to think about your opportunity cost (what you give up). Use your cards or your table from Task #1 to help answer the following questions:

1. If someone wanted to trade 1 pan of brownies for 1 pie, your opportunity cost for the brownies would be 1 pie. If you produced 1 pan of brownies, what is your opportunity cost? _____ Are you better off making the brownies or trading for the brownies? Why? _____

2. If someone wanted to trade 1 pan of brownies for 2 pies, your opportunity cost for the brownies would be 2 pies. Are you better off making the brownies or trading for the brownies? Why? _____

3. If someone wanted to trade 1 pan of brownies for 3 pies, your opportunity cost for the brownies would be 3 pies. Are you better off making the brownies or trading for the brownies? Why? _____

Note that if you can trade for a good for less than what it costs you to produce it (see Task #3), it would be best not to produce that good and to specialize in the production of the other good.

Handout 5-3: Terran Worksheet (page 2 of 3)




Task #5: The Gains from Trade

1. Suppose that pies and pans of brownies can be traded one-for-one. Which good should you specialize in producing? _____
2. Assume that you specialize and can trade at the one-for-one rate. In the third row (labeled "Trade") of the table from Task #1, write the number of pans of brownies it would be possible for you to have with each amount of pies shown.
3. Look at Task #2 and identify the combinations that are now possible for you to enjoy that were not possible before trade. _____

Handout 5-4: Aquan Worksheet (page 1 of 3)

Task #1: Production

1. Turn your production cards so that every hour is spent making pans of brownies.
2. What is the total amount of pans of brownies you could produce? _____
3. If you produced that total, how many pies could you produce? _____
4. Enter this number below the "6" in the table below.
5. Turn over *one* of your production cards so that now 1 hour is spent making pies.
6. Now you can produce _____ pans of brownies and _____ pies. Write the number of pies below the "5" in the table.
7. Continue turning over the other production cards, one at a time. Each time you turn over a card, in the table write the largest amount of pies that you can produce with that amount of pans of brownies production.

	6	5	4	3	2	1	0
							
							

Task #2: Production Possibilities

Put a checkmark ✓ next to the combinations of pans of brownies and pies below that are possible for you to produce in 8 hours. Put an X next to the combinations of pans of brownies and pies below that are *not* possible for you to produce in 8 hours. You may use your cards or the table above to decide.

- | | |
|----------------------------|---------------------------|
| a. 2 pans and 2 pies _____ | e. 4 pans and 1 pie _____ |
| b. 7 pans and 0 pies _____ | f. 1 pan and 5 pies _____ |
| c. 2 pans and 4 pies _____ | g. 1 pan and 2 pies _____ |
| d. 0 pans and 3 pies _____ | h. 5 pans and 1 pie _____ |

Handout 5-4: Aquan Worksheet (page 2 of 3)

Task #3: Opportunity Cost

The opportunity cost of doing something is what must be given up to do it. Using the table from Task #1, answer the following questions:

1. If you produced an extra $\frac{1}{2}$ pie, what is the opportunity cost—how many pans of brownies do you give up? _____
2. If you produced 1 extra pie, what is the opportunity cost—how many pans of brownies do you give up? _____
3. If you produced 1 extra pan of brownies, what is the opportunity cost—how many pies do you give up? _____
4. For every extra pie you produce, the opportunity cost is _____ pans of brownies.
5. For every extra pan of brownies you produce, the opportunity cost is _____ pies.

Task #4: Trading

Suppose you decide that you absolutely must have 2 pans of brownies and 4 pies to make it through the day. Can you produce this combination? _____

You can try to achieve this combination through trade. How will you know whether to trade? You have to think about your opportunity cost (what you give up). Use your cards or your table from Task #1 to help answer the following questions:

1. If someone wanted to trade 1 pie for 1 pan of brownies, your opportunity cost for the pie would be 1 pan of brownies. If you produced 1 pie, what is your opportunity cost? _____ Are you better off making the pie or trading for the pie? Why? _____

2. If someone wanted to trade 1 pie for 2 pans of brownies, your opportunity cost for the pie would be 2 pans of brownies. Are you better off making the pie or trading for the pie? Why? _____

3. If someone wanted to trade 1 pie for 3 pans of brownies, your opportunity cost for the pie would be 3 pans of brownies. Are you better off making the pie or trading for the pie? Why? _____

Note that if you can trade for a good for less than what it costs you to produce it (see Task #3), it would be best not to produce that good and to specialize in the production of the other good.

Handout 5-4: Aquan Worksheet (page 3 of 3)

Task #5: The Gains From Trade

1. Suppose that pies and pans of brownies can be traded one-for-one. Which good should you specialize in producing? _____
2. Assume that you specialize and can trade at the one-for-one rate. In the third row (labeled "Trade") of the table from Task #1, write the number of pies it would be possible for you to have with each amount of pans of brownies shown.
3. Look at Task #2 and identify the combinations that are now possible for you to enjoy that were not possible before trade. _____

Handout 5-5: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. The total amount of goods that a country is able to produce is limited by
 - a. its government.
 - b. the amount of money its people have.
 - c. the amount of resources its people have.
 - d. the amount of goods its people want.
2. The people of Eurostan can produce 1,000 cars and 500 trucks per year if they use all of the available resources. If they produce 1,200 cars, they can only produce 400 trucks. The opportunity cost of the additional 200 cars is
 - a. 100 trucks.
 - b. 200 trucks.
 - c. \$400,000.
 - d. \$200,000.
3. It's better for people in a country to trade for a good than to produce the good if the opportunity cost of producing it is
 - a. low overall.
 - b. high overall.
 - c. lower than the cost of trading.
 - d. higher than the cost of trading.

Short Answer

Directions: Answer the following question using complete sentences.

4. How can people consume more of a good than they are able to produce themselves?

Standards and Benchmarks

National Content Standards in Economics

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 4**
 1. Exchange is trading goods and services with people for other goods and services (called barter) or for money.
 3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more informal exchanges of favors and courtesies.
- **Benchmarks: Grade 8**
 1. When people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.
 2. Voluntary exchange among people or organizations gives people a broader range of choices in buying goods and services.

Standard 6: Specialization

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

- **Benchmarks: Grade 4**
 1. Economic specialization occurs when people concentrate their production on fewer varieties of goods and services than they consume.
 4. Greater specialization leads to increasing interdependence among producers and consumers
- **Benchmark: Grade 8**
 2. Like trade among individuals within one country, international trade promotes specialization and division of labor and increases the productivity of labor, output, and consumption.

A Yen to Trade

Lesson 6: Trading Circles

Author

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Standards and Benchmarks (see page 6.11)

Lesson Description

Students draw ever larger circles on a chart to observe how the size of one's trading area affects what goods and resources are available to them and how exports and imports are defined.

Grade Level

6-8

Concepts

Economic wants
Exports
Goods
Imports
Resources
Services

Objectives

Students will be able to

- define economic wants, exports, goods, imports, resources, and services;
 - explain why a larger trading region enables people to choose from a larger amount of goods and services;
 - recognize that exports and imports are defined relative to a particular trading region; and
 - describe the main imports and exports of their state and country.
-

Compelling Question

How does the size of a trading region affect exports and imports?

Time Required

45-60 minutes

Materials

- Handouts 6-1, 6-2, 6-3, and 6-4, one copy of each for each student
 - A pencil for each student
 - Internet access and almanacs and/or other reference material
 - Optional: scissors
-

Procedure

1. Explain that people have many economic wants. **Economic wants** are desires that can be satisfied by consuming goods and services. Define **goods** as objects that satisfy people's wants, and define **services** as actions that satisfy people's wants.
 2. Tell the students that you bought a new book because reading is entertaining for you and helps you relax. Point out that the book is a good and that the want it satisfies is the desire to relax. Explain that you also have an appointment to have your teeth cleaned. Explain that teeth cleaning is a service and that it satisfies your desire to have healthy teeth. Ask students for examples of goods and services and the economic wants they satisfy. (*Answers will vary. A car is a good that satisfies a person's desire to move from one place to another. An apple is a good that satisfies a person's hunger. A haircut is a service that satisfies a person's want for shorter hair/neater appearance.*)
 3. Explain that **resources** are those things that are used to produce goods and services. Resources include human resources, such as people doing work; capital resources, such as tools, machines, and equipment; and natural resources, such as land, water, and minerals. Ask students for examples of resources used to produce an education at school. (*Answers will vary. Human resources include teachers, principal, janitor, bus driver, librarian, and school nurse. Capital resources include school building, desks, computers, playground equipment, white boards, tables, and chairs. Natural resources include water, land for the building and playground, sand for the windows in the building, and trees for shade around the school.*)
 4. Point out that generally, the more goods and services people have, the more economic wants they can satisfy and the happier they are (at least in an economic sense). Also, the more resources they have available, the more goods and services they can produce.
-

5. Distribute a pencil and a copy of *Handout 6-1: Resources, Goods, and Services*, *Handout 6-2: Trading Circles*, and *Handout 6-3: Resources, Goods, and Services Tally* to each student. Instruct the students to choose and mark any one point that they want on Handout 6-1. Have students place the center of circle #1 on Handout 6-2 underneath their marked point. Then, have them trace the circle on Handout 6-1. (Optional: Have students cut out circle #1, center it over their point, and trace the circle.)
6. Tell the students that this circle represents their trading area. Each symbol represents a resource that is available in this region or a good/service that can be produced with resources in the area.
7. Instruct the students to use Handout 6-3 to tally the amount of each resource, good, or service (symbol) that they have in their trading circle. The symbol must be entirely inside the circle to count. Have some students share their lists with the class. The lists will vary depending on where the students placed their original points. Discuss the following:
 - How many students have trees? Factories? Books? Vegetables? Copper deposits? Skilled workers? Electronics? Clothing? Vacation resorts? Cars? (*Answers will vary.*)
 - How many have all resources, goods, and services? (*No one*)
 - Are resources, goods, and services evenly distributed throughout the world? (*No.*) Give some examples. (*Russia has vast forests, and Egypt has none. Central America grows a lot of bananas, but none are grown in Iceland. The average person in the United States has many goods and services, but the average person in Bangladesh has very few. Saudi Arabia has a lot of oil; Japan doesn't. Many electronics are produced in Japan but not in Saudi Arabia.*)
8. Explain that any resource, good, or service outside their trading circles must be imported into their region for them to use or consume. **Imports** are resources, goods, and services that are produced abroad but sold domestically. Imports are brought into the region from outside the region. Resources, goods, or services sent out of a region are called exports. **Exports** are resources, goods, and services that are produced domestically but sold abroad. Each student's tally under Column #1 represents the possible exports of his or her region. Those symbols not on the list are possible imports from other regions. Discuss the following:
 - Why would people in a region want to import resources, goods, or services? (*Imports enable people in the region to produce or to have more goods/services than they could otherwise enjoy. It also increases competition, which generally leads to lower prices and better-quality goods/services.*)
 - Why would people in a region want to export resources, goods, or services? (*Exports enable people in the region to earn income, which allows them to pay for imports that they cannot produce at all or that they cannot produce as cheaply.*)

9. Instruct the students to use circle #2 on Handout 6-2 and to draw a new trading circle around the point they used the first time on Handout 6-1. Using Handout 6-3 again, have them tally the symbols inside their new trading circle. Discuss the following:
 - How has your tally changed? *(It includes everything on the first list, and it likely includes some new symbols and/or more of the old.)*
 - Could you make beneficial trades with other students? *(Yes. Students could trade symbols with each other to eliminate gaps in resources, goods, and services.)*
10. Tell the students to complete the tally process using trading circles #3, #4, and #5. When students have completed Handout 6-3, ask them what conclusion they can draw about the relationship among imports, exports, and trading region size. *(As the trading region size increases, there are more things available for export, and there will be less reliance on imports. The size of the trading region affects what things can be exported or what must be imported to satisfy wants.)*
11. Using an almanac, other reference materials, or online resources, have students identify imports and exports of their state and imports and exports of the United States. *(Answers will vary. People in Florida export oranges and grapefruit. People in the United States import automobiles, and they export corn, airplanes, and financial services.)*

Closure

12. Discuss the following to emphasize the major points of the lesson:
 - What are goods? *(Objects that satisfy people's wants)*
 - Give an example of a good that satisfies a want you have. *(Answers will vary. An apple satisfies hunger; a coat satisfies the desire to be warm/dry; a pencil satisfies the desire to write; and a toy or game satisfies the desire for entertainment.)*
 - What are services? *(Actions that satisfy people's wants)*
 - Give an example of a service that satisfies a want you have. *(Answers will vary. A visit to a doctor satisfies the desire to be healthy; a visit to a museum satisfies the desire for entertainment/education.)*
 - What are resources? *(Things used to produce goods and services)*
 - What are imports? *(Imports are resources, goods, and services that are produced abroad but sold domestically.)*
 - What are exports? *(Exports are resources, goods, and services that are produced domestically but sold abroad.)*
 - Why might people in a region want to import resources, goods, or services? *(To satisfy wants that they may not be able to satisfy without importing.)*

- As the size of a trading region grows, do more or fewer resources, goods, and services become possible exports and imports? (*More export possibilities; fewer import necessities*)
 - The larger a trading region is, is it less or more dependent on trade with other regions? (*Less*)
-

Assessment

13. Distribute a copy of *Handout 6-4: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Fill in the Blank

1. People in the United States buy Chinese electronics such as cell phones. Are electronics goods or services? (*Goods*)
2. In trading terms, are Chinese electronics imports or exports for the United States? (*Imports*)
3. Are these same electronics imports or exports for China? (*Exports*)
4. People in the United States buy these electronics because the electronics satisfy *wants*.

Short Answer

Describe how different your life would be if no trade were allowed between people in your state and people in other states in the U.S.

Answers will vary.

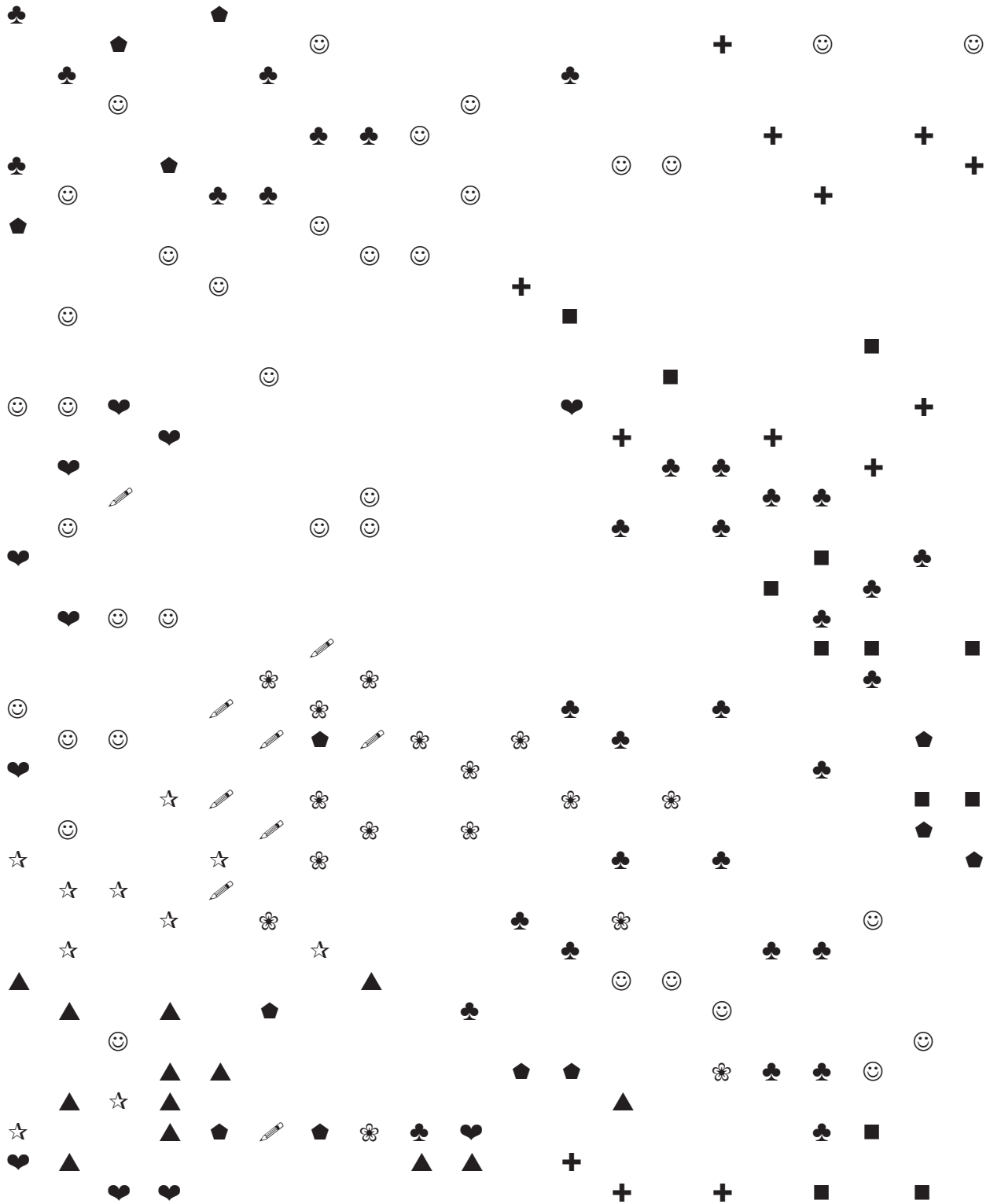
There is no oil in my state and we don't produced gasoline, so it would be difficult for my family to have a car.

We have a cold climate for part of the year. We don't grow oranges, grapefruits, lemons, or limes, so we wouldn't have access to these foods.

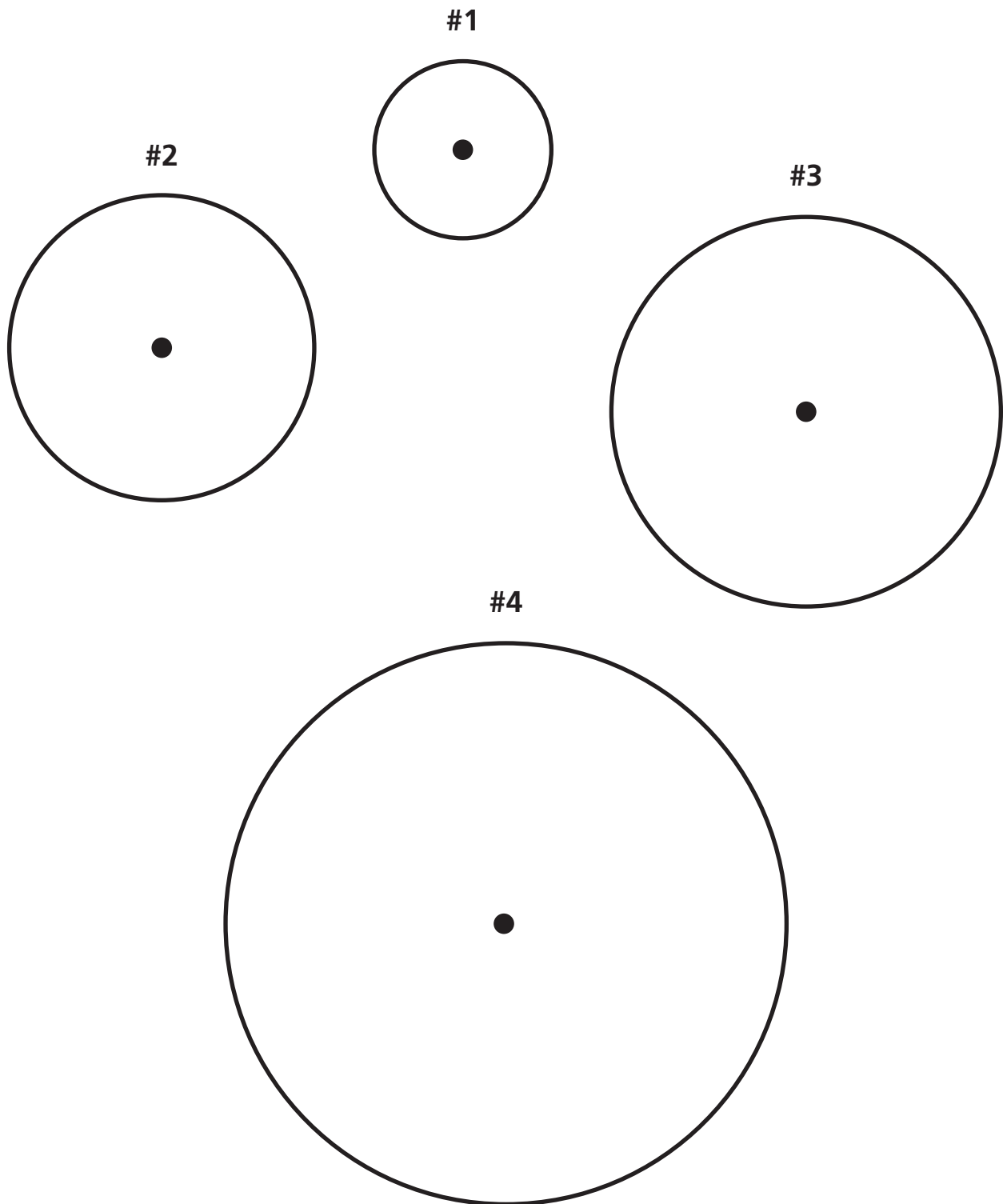
People in my state have trees of many types and grow corn, wheat, and soybeans. They wouldn't be able to earn income by selling these products to people in other states.

My mother has her own business creating websites for people. Many of her customers live outside our state. She wouldn't be able to provide this service, so she wouldn't earn as much income for our family.

Handout 6-1: Resources, Goods, and Services

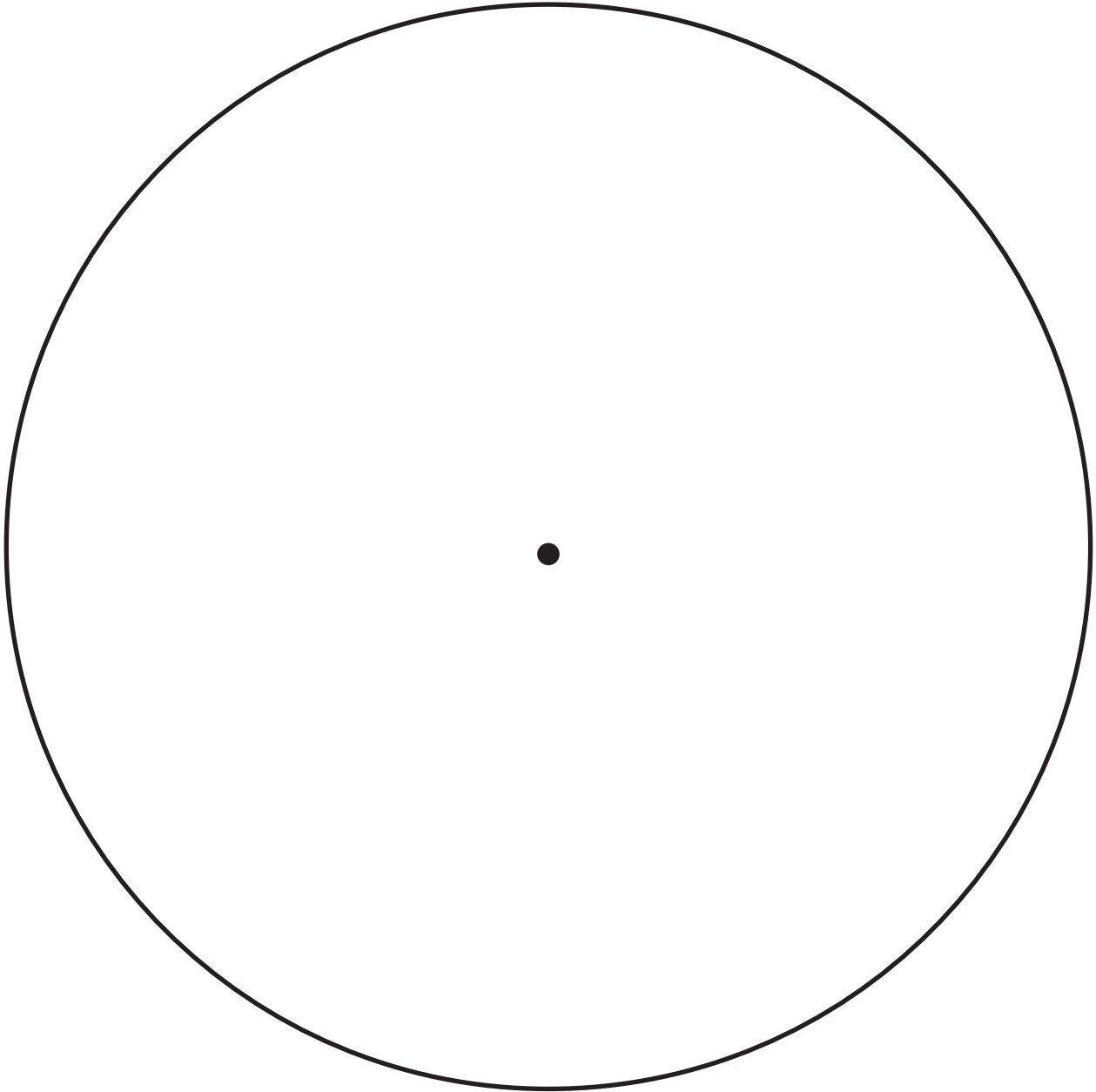


Handout 6-2: Trading Circles (page 1 of 2)













Handout 6-2: Trading Circles (page 2 of 2)

#5



Handout 6-3: Resources, Goods, and Services Tally

Tally how many of each resource, good, or service you have in each trading circle.

Resources, goods, and services	Circle #1	Circle #2	Circle #3	Circle #4	Circle #5
 (trees)					
 (factories)					
 (books)					
 (vegetables)					
 (copper deposits)					
 (skilled workers)					
 (electronics)					
 (clothing)					
 (vacation resorts)					
 (cars)					

Handout 6-4: Assessment

Fill in the Blank

Directions: Fill in the blanks that follow each question.

1. People in the United States buy Chinese electronics such as cell phones. Are electronics goods or services?

2. In trading terms, are Chinese electronics imports or exports for the United States?

3. Are these same electronics imports or exports for China? _____

4. People in the United States buy these electronics because the electronics satisfy

_____.

Short Answer

Directions: Answer the question below using complete sentences.

Describe how different your life would be if no trade were allowed between your state and other states in the U.S.

Standards and Benchmarks

National Content Standards in Economics

Standard 1: Scarcity

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

- **Benchmarks: Grade 4**
 2. Economic wants are desires that can be satisfied by consuming a good (an object), a service (an action), or a leisure activity.
 6. Productive resources are the natural resources, human resources, and capital goods available to make goods and services.

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 8**
 5. Imports are foreign goods and services that are purchased from sellers in other nations.
 6. Exports are domestic goods and services that are sold to buyers in other nations.

A Yen to Trade

Lesson 7: Trading Hurdles

Author

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Standards and Benchmarks (see page 7.14)

Lesson Description

In this very active lesson, students represent goods being traded among countries. As the students move in trade, they encounter physical barriers (long-jump, hurdle, and limbo bar) that represent natural and government-imposed trade barriers. Through the activities, students see that trade barriers reduce the flow of goods and services among countries and, as a result, reduce the gains from trade. Because of the activities in this lesson, it might be good to work with the physical education teacher.

Grade Level

6-8

Concepts

Embargo
Opportunity cost
Quota
Standard
Tariff
Trade barriers

Objectives

Students will be able to

- define embargo, opportunity cost, quota, standard, tariff, and trade barriers;
 - distinguish between natural and government-imposed trade barriers;
 - describe how trade barriers raise the cost of goods from other countries; and
 - explain why trade barriers result in fewer goods being traded.
-

Compelling Question

How do natural and government-imposed trade barriers affect trade?

Time Required

45-60 minutes

Materials

- Visuals 7-1 and 7-2, one copy of each for the teacher to display
 - Handouts 7-1 and 7-2, one copy of each for each student
 - Two yardsticks, broom handles, or small jump ropes
 - Gymnastics mats
 - Optional: Sticky dots in two colors—enough of each color to give one color dot to students in one-half of the class and the other color dot to students in the other half of the class
-

Procedure

1. Tell the students that today's activity requires a lot of open space in the center of the classroom. Ask them to move their desks (or tables and chairs) toward the classroom walls. Explain the following:
 - **Trade** is the exchange of resources, goods, or services for other resources, goods, or services, or for money. When voluntary trade occurs, both traders expect to gain—they expect to get more satisfaction or value from the good received than from the good they traded. If they don't expect to gain from the trade, then they won't trade.
 - Trading involves both benefits and costs. When people trade, they receive something they want more than what they have; this is a benefit. At the same time, they give up what they trade; this is a cost. For example, if Jason trades one of his popular action figures for one of Tim's baseball cards, then the cost to Jason is the fun he would have had playing with the action figure. The benefit of the trade is the satisfaction Jason receives from owning the baseball card. For Tim, the cost is the satisfaction he had from owning the baseball card; the benefit is the fun he will have playing with the action figure.
 - If Jason pays his friend \$10 for the baseball card, Jason gives up something, and it is not just the \$10. Jason gives up the opportunity to have the next most-valued item on which he could have spent \$10. This item that Jason gives up is called his opportunity cost. **Opportunity cost** is the value of the next-best alternative when a decision is made; it's what is given up.
 - Point out that whether Jason trades using money or another item, he will only trade as long as he thinks the benefit of owning the baseball card is greater than the cost. This is true for all traders.
-

2. Tell the students that they will now participate in a trading activity. Select one or two students to act as helpers so that an even number of students remain after the helpers have been selected. Divide the rest of the class in half. Ask half the students to stand in front of the open area of the room and the other half to stand in the back of the open area of the room.
3. Tell the students in the front of the room that each of them is a “tubble.” A tubble is a good that people in their country, Frontier, specialize in producing. Give each tubble student the same colored sticky dot and ask them to place the dots on their shirts. Tell the students in the back of the room that each of them is a “krone.” A krone is a good that people in their country, Outback, specialize in producing. Give each krone student the other color sticky dot and ask them to place the dots on their shirts.
4. Explain that people in both countries have determined that trading one tubble for one krone makes everyone better off. (That is, the benefit of an extra krone to a citizen of Frontier is greater than the benefit of a tubble to them. The benefit of an extra tubble to an Outback citizen is greater than the benefit of a krone to them.)
5. Have the helpers place two yardsticks (or small jump ropes) on the mats next to each other no more than six inches apart. (See diagram below.)



6. Display *Visual 7-1: Outback and Frontier Trading* and explain that for goods (tubbles and kronen) to move from Outback to Frontier and from Frontier to Outback, students must jump over the yardsticks. Students will execute standing jumps, not running jumps. Each time one tubble and one krone make it over the yardsticks, a trade has been completed.
7. Have one student demonstrate a standing jump over the yardsticks. Then, have students from each country alternate jumping over the yardsticks. Count the number of completed trades (one krone and one tubble) and record this information in the table on *Visual 7-1* under “Round 1.”
8. Instruct the students to walk back to their original countries. Explain that each student in Frontier is once again a unit of tubble and that each student in Outback is once again a unit of krone. Tell the helpers to place the yardsticks one foot apart. Explain that the rules are the same. In order for a trade to occur, both a tubble student and a krone student must make it over the yardsticks into the other country. If not, both the tubble and the krone must remain in their original countries. Count the number of completed trades and record that information in the table on *Visual 7-1* under “Round 2.” Have students return to their respective countries. Make sure, based on the color of their sticky dots, that all students are in the correct place.

9. Repeat steps 7 and 8. In Round 3, move the yardsticks apart another foot. If necessary, add additional rounds so that in the final round, no trades can be completed. Refer students to the information recorded on Visual 7-1 and discuss the following:
 - What happened to the number of completed trades as the distance between the two yardsticks increased? (*The number of completed trades decreased.*)
 - Would you expect the people of Frontier to be more or less happy as the distance between the yardsticks increased? (*Less happy*) Why? (*They acquire fewer kronas.*)
 - Would you expect the people of Outback to be more or less happy as the distance between the yardsticks increased? (*Less happy*) Why? (*They acquire fewer tubbles.*)
10. Explain that the jump represents transporting goods and services from one country to another. If the distance isn't great, it is less costly to transport goods by air, ship, or truck. However, as the distance increases, the transportation costs are greater. As a result, fewer trades are likely to be made because the costs of the trades are greater than the benefits received from the trades. Explain that the cost of trading with someone who lives nearby is less than the cost of trading with someone who lives far away.
11. Tell the students that they have some more jumps to make. Refer to "Hurdles" in the first column of the table on Visual 7-1. Ask helpers to hold one of the yardsticks about one foot from the ground. Explain that students from each country will alternate jumping over the yardstick. Each pair of students (one from Outback and one from Frontier) that completes the jump represents a trade. After the first round of jumps, record the number of completed trades under Round 1 in the table.
12. Instruct the helpers to raise the yardstick another foot. Have students from each country alternate jumping over the yardstick. After the jumps are completed, record the number of completed trades under Round 2 in the table. Repeat until no trades can be completed. Discuss the following:
 - What happened to the number of completed trades as the distance of the yardstick from the floor increased? (*The number of completed trades decreased.*)
 - Would you expect the people of Frontier and Outback to be more or less happy as the distance of the yardstick from the floor increased? (*Less happy*) Why? (*The people from Frontier acquire fewer kronas, and the people from Outback acquire fewer tubbles.*)
13. Explain that the height of the yardstick represents high mountains, "high" seas, or high temperatures. As demonstrated in the activity, these all make trading more difficult or expensive so that less trading occurs. These factors, along with distance, are called trade barriers. A **trade barrier** is anything that makes trading less desirable or more difficult to do. Explain that distance, mountains, rough terrain, high temperatures, or rough seas are natural barriers to trade; that is, barriers imposed by nature. Explain that sometimes the government of a country may

impose trade barriers. This means that the government of the country does something that makes trade more difficult. For example, a government may charge a tariff. A **tariff** is a tax that must be paid before a good may be brought into a country.

14. Ask a student to demonstrate jumping over the raised yardstick and point out that the height of the yardstick now represents the amount of the tariff. As the yardstick gets higher, fewer students would be able to jump over, and so fewer trades would occur. In the same way, as a tariff “gets higher,” the cost of bringing goods into the country rises, and fewer trades are desirable.
15. Tell the students that they will engage in another round of trading. (Quietly, tell the helpers to allow the first five students from each country to jump over the yardstick as it lies on the floor. Then, they should raise the yardstick as high as they can so that no one could possibly jump over it.) After the students have jumped/tried jumping, explain that this activity demonstrates what happens when the government imposes a quota. A **quota** is a limit placed on the amount of a good or service that may come into a country. In the example, five kroners could come into Frontier and five tubbles could come into Outback. Once that limit was reached, no more of the goods were allowed in.
16. Instruct the students to return to their original countries. Instruct the helpers to again hold the yardstick as high as they can. Ask students why no trade will occur. (*No one can jump over the yardstick.*) Explain that this situation represents an embargo. An **embargo** is a government order that prohibits trade with a country or group of countries. An embargo is a quota of zero.
17. Tell the students that they will participate in one more activity. Ask the students if they have ever played limbo. (*Answers will vary.*) Refer to “Limbo” in the first column of the table on Visual 7-1. Explain that this time the yardstick will be a limbo bar. Instruct the helpers to hold the limbo stick about chest high. The students must pass under the limbo bar to move into the other country. Each time a krone and a tubble pass under the bar, a trade is complete. Have students from each country alternate moving under the limbo bar. When all students have participated, record the number of completed trades under Round 1 on Visual 7-1.
18. Instruct the students to return to their home countries. Walk up to the yardstick, push it down approximately one foot, and have students from each country alternate moving under the limbo bar. When all of the students have had a turn, record the number of completed trades in the table under Round 2 on Visual 7-1. Repeat until no trades can be completed. Discuss the following:
 - What must a tubble or a krone do in order to move to the other country? (*It must pass under the limbo bar without knocking it over or falling to the ground.*)
 - As the bar was pushed lower, what happened to the number of completed trades? (*It decreased*) Why? (*It became harder and harder for students to go low enough to get under the bar.*)

19. Explain that, in this demonstration, the yardstick represents a standard or requirement that a good must meet in order to enter the country. Tubbles and kronen had to meet the requirement of passing under the limbo bar. In real-world trading, a **standard** is a health, safety, environmental, or other requirement that must be met for trade to take place. For example, medicines from other countries must meet safety and health standards before they are allowed into the United States. Milk produced in the United States must be free of certain chemicals before it is allowed into European countries. Instruct the students to return to their seats and complete the closure activity.
-

Closure

20. Display *Visual 7-2: Trade Barriers* and distribute a copy of *Handout 7-1: Things to Remember About Trade Barriers* to each student. Tell students to record notes about trade barriers on Handout 7-1 as you discuss the topics on Visual 7-2. Discuss the following to emphasize the major points of the lesson:
- What is a trade barrier? (*Anything that makes trade less desirable or more difficult to do*)
 - Trade barriers imposed by nature are called natural trade barriers. Why is distance between traders a barrier? (*Traveling long distances takes more time, is more difficult, and requires more fuel. These things make it more costly to travel long distances than short distances.*)
 - What are some other geographic barriers to trade? (*Mountains, rough terrain, climate*)
 - What is another category of trade barriers? (*Government-imposed trade barriers*)
 - What are examples of government-imposed trade barriers? (*Tariffs, quotas, embargos, standards*)
 - What is a tariff? (*A tax that must be paid before a good may be brought into a country*)
 - What is a quota? (*A limit placed on the amount of goods that may come into a country*)
 - What is an embargo? (*Not allowing any of a good into a country*)
 - What is a standard? (*A health, environmental, safety, or other requirement that must be met in order for trade to take place.*)
 - People agree to trade voluntarily because both traders expect to gain. What do we mean when we say people expect to gain from trade? (*They expect to be happier and have more satisfaction from what they have after the trade than before the trade.*)
 - What is the benefit traders receive? (*They get more of something they want.*)
 - What is the cost of trading? (*Giving up something to make the trade—an opportunity cost*)
 - As the cost of trading rises, will more or less trading occur? (*Less*)
 - Do trade barriers raise or lower the cost of trading? (*They raise the cost.*)
-

Assessment

21. Distribute a copy of *Handout 7-2: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. Trade barriers
 - a. increase the amount of goods that are traded.
 - b. *increase the cost of trading goods.*
 - c. make people better off.
 - d. make trading easier.
2. Which of the following is an example of a geographic trade barrier?
 - a. Tariff
 - b. Quota
 - c. Very low shipping costs
 - d. *A long distance between traders*
3. Generally, more trade occurs between two countries
 - a. with lower quotas.
 - b. *with lower tariffs.*
 - c. that are farther away from each other.
 - d. that have more standards traded goods must meet.
4. If Canada refuses to trade with the United States—if Canada won't allow any U.S. goods into Canada—then this is an example of a(n)
 - a. tariff.
 - b. quota.
 - c. standard.
 - d. *embargo.*

Short Answer

5. Canada and Mexico are two of the United States' largest trading partners. Using what you learned about trade barriers, explain why they trade a great deal with one another.
Both Mexico and Canada border the United States, so they are closer than other countries with which the United States might trade. So distance is less of a barrier to trade than

trade with other countries. In addition, there are no major geographic barriers between these countries and the United States.

6. What is a quota and how does it limit trade?

A quota is a limit placed by a government on the amount of a good that can come into the country from another country. Once the limit is reached, no more goods are allowed in a country.

7. If the United States imposes a tariff on cars produced in Mexico, what will happen to trade between the two countries?

Trade between the two countries will decrease, and the price of Mexican cars sold in the United States will increase.

8. New medications must meet certain requirements before they can be sold in Germany. What type of barrier is this? How does this affect U.S. trade with Germany?

Requirements are standards. The United States must meet the standards before trading with Germany.

Visual 7-1: Outback and Frontier Trading

Trades	Number of completed trades				
	Round 1	Round 2	Round 3	Extra rounds	
Standing long-jump					
Hurdles					
Limbo					

Visual 7-2: Trade Barriers

NATURAL TRADE BARRIERS

Distance: How far goods are shipped between countries.

Geography: Mountains, waterways, climate, or other physical factors that make the transportation of goods between countries difficult.

GOVERNMENT-IMPOSED TRADE BARRIERS

Tariff: A tax that must be paid before a good may be brought into a country.

Quota: A limit on the quantity of a good that can come into a country.

Embargo: A government order that limits or prohibits trade with a particular country or group of countries.

Standard: A requirement that must be met in order for trade to take place. For example, there may be requirements related to safety, health, or the environment.

Handout 7-1: Things to Remember About Trade Barriers

1. What is a trade barrier?

NATURAL TRADE BARRIERS

2. Why is distance between traders a barrier?

3. What are some geographic barriers to trade?

GOVERNMENT-IMPOSED TRADE BARRIERS

4. What is a tariff?

5. What is a quota?

6. What is an embargo?

7. What is a standard?

Handout 7-2: Assessment (page 1 of 2)

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. Trade barriers
 - a. increase the amount of goods that are traded.
 - b. increase the cost of trading goods.
 - c. make people better off.
 - d. make trading easier.

2. Which of the following is an example of a geographic trade barrier?
 - a. Tariff
 - b. Quota
 - c. Very low shipping costs
 - d. A long distance between traders

3. Generally, more trade occurs between two countries
 - a. with lower quotas.
 - b. with lower tariffs.
 - c. that are farther away from each other.
 - d. that have more standards traded goods must meet.

4. If Canada refuses to trade with the United States—if Canada won't allow any U.S. goods into Canada—then this is an example of a(n)
 - a. tariff.
 - b. quota.
 - c. standard.
 - d. embargo.

Handout 7-2: Assessment (page 2 of 2)

Short Answer

Directions: Answer the questions below using complete sentences.

5. Canada and Mexico are two of the United States' largest trading partners. Using what you learned about trade barriers, explain why they trade a great deal with one another.

6. What is a quota and how does it limit trade?

7. If the United States imposes a tariff on cars produced in Mexico, what will happen to trade between the two countries?

8. New medications must meet certain requirements before they can be sold in Germany. What type of barrier is this? How does this affect U.S. trade with Germany?

Standards and Benchmarks

National Content Standards in Economics

Standard 1: Scarcity

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

- **Benchmarks: Grade 4**
 4. Whenever a choice is made, something is given up because resources are limited.
 5. The opportunity cost of an activity is the value of the best alternative that would have been chosen instead. It includes what would have been done with the money spent and the time and other resources used in undertaking the activity.

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmark: Grade 4**
 3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more informal exchanges of favors and courtesies.
- **Benchmarks: Grade 8**
 1. When people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.
 3. The gains from free trade are not distributed equally, and some individuals or groups may lose more than they gain when trade barriers are reduced.
 4. Despite the mutual benefits from trade among people in different countries, many nations employ trade barriers to restrict free trade for national defense reasons, to protect key industries, or because some companies and workers are hurt by free trade.
 5. Imports are foreign goods and services that are purchased from sellers in other nations.
 6. Exports are domestic goods and services that are sold to buyers in other nations.
 7. Voluntary exchange among people or organizations gives people a broader range of choices in buying goods and services.

A Yen to Trade

Lesson 8: Pieces of Paper

Author

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Standards and Benchmarks (see page 8.13)

Lesson Description

Students play the role of traders in both a simple barter economy and an economy that uses money to see how much easier trade is with money. Students explain why countries would want their own money. Then, they design paper money for North America.

Grade Level

6-8

Concepts

Barter
Money

Objectives

Students will be able to

- define barter and money;
 - explain how money makes trading easier;
 - explain why countries would want to have their own money; and
 - recognize some characteristics that money must have.
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Compelling Question

Why do people use money?

Time Required

50-60 minutes

Materials

- Handouts 8-1, 8-2, and 8-3, one copy of each, cut apart
 - Handout 8-4, one copy for each student
 - Five sheets of 8½" x 5½" drawing paper for each vendor (8 or 16 students)
 - One sheet of 8½" x 5½" drawing paper for each customer (2 to 8 students)
 - Crayons or markers for each student
 - Scissors
 - U.S. dollar bills
 - Currency from another country or countries
 - World map or map of Europe
 - Link to Explore Economics Video Series, Episode 3: "What Makes Something Useful as Money?" (3-minute video); <https://www.stlouisfed.org/education/exploring-economics-video-series/episode-3-what-makes-something-useful-as-money>
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Procedure

1. To begin the lesson, discuss the following:
 - What are traders? (*Answers will vary.*) Explain that traders are people who exchange one thing for another.
 - What are vendors? (*Answers will vary.*) Explain that the verb "to vend" means to sell and that vendors are people who sell things to customers.
 2. Explain that students will participate in an activity in which some of them will be vendors and some will be customers. The students' desks will represent shops or tables in a marketplace. Both vendors and customers are traders in the marketplace. Instruct the students to arrange their desks around the room so that there is open space in the center of the room and people can walk from desk to desk as they trade.
 3. Select 16 students to act as vendors. (NOTE: For smaller classes, select eight students and ask each student to represent two vendors. There must be at least 16 vendors for this activity.) Give each vendor a card from *Handout 8-1: Vendor Cards*. Explain that these cards tell vendors what good or service they can trade away and what two goods or services they hope to get. Distribute five sheets of drawing paper, crayons or markers, and scissors to each vendor. Instruct the vendors to draw on each sheet of paper a picture of the good or service they have to trade and then cut out the pictures. These will represent five units of their good or service when trading begins.
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4. Explain that the remaining students will be customers coming to the marketplace. (NOTE: There should be at least two customers but not more than eight.) Give each customer a card from *Handout 8-2: Customer Cards*. Explain that these cards tell customers the good or service they can trade and the good or service they want. Distribute a sheet of drawing paper, crayons or markers, and scissors to each customer. Instruct the customers to draw a picture of the good or service they have to trade and then cut out the picture. This will represent one unit of their good or service when trading begins.
5. When all students have completed their drawings, explain that customers will enter the marketplace. Their goal is to obtain the good or service they want (as listed on their card). They may make any trades they can to meet their goal. Explain that vendors will stand at their shops with their goods and services. People in the marketplace are free to “shout out” what they will offer and what goods or services they will accept.
6. Instruct the customers to enter the marketplace and then announce that trading may begin. Allow the trading to continue until all customers have made the necessary trades or 10 minutes have passed. Instruct the students to return to their desks or sit down on the floor in the center of the marketplace. Discuss the following:
 - How many were able to get the goods or services you wanted? (*Answers will vary.*)
 - How many were unable to get the goods or services you wanted? (*Answers will vary.*)
 - Customers, how many traded more than once? (*Most*) Why? (*Customers needed to find what a vendor wanted in exchange. NOTE: Other than customer #5, no customer is able to make a single exchange because there is no coincidence of wants. Therefore, they must make multiple trades in an effort to ultimately get the good that the vendor with whom they wish to trade wants.*)
7. Tell the students that they will participate in another round of trading. Return the pictures of goods and services to the vendors and customers who had them at the beginning of the first round. Distribute a 10-Jacs card from *Handout 8-3: Jacs* to each customer. Tell vendors that they can now accept the goods they want or 10 Jacs for each unit of the good or service they sell. Anyone can use Jacs to trade for any good or service.
8. When everyone is ready, announce the start of the second round of trading. Allow trading to continue until all traders have made the necessary trades or 10 minutes have passed. When trading is complete, discuss the following:
 - How many were able to get the things you wanted the most? (*All or most*)
 - What was the difference about trade in this round? (*Vendors would accept Jacs.*)
 - Was trade less or more difficult in this round? (*Less difficult*) Why? (*A customer could obtain immediately what he or she wanted by using Jacs. Multiple trades weren't necessary.*)

- Did traders and customers have to “shout out” what they wanted and what they had? (No) Why? (*The vendors were willing to accept Jacs, so the customers simply went to the vendor and bought what they wanted using Jacs.*)
 - Why did vendors accept Jacs? (*They were told they could use them to trade for items each of them wanted, just as the customers could trade with Jacs for what they wanted.*)
9. Explain that in the first round of trading, the students used barter. **Barter** is trading goods and services for other goods and services without using money. In the second round of trading, Jacs were used as money. **Money** is anything widely accepted in exchange for goods and services. Discuss the following:
- Must you “shout out” what you have and what you want to buy when you shop at stores or a mall? (No) Why? (*People use money to shop at stores or a mall.*)
 - What is U.S. money called? (*Dollars and cents*)
 - Why are stores in the mall willing to accept dollars and cents? (*Store owners know that they can use dollars and cents to pay their employees and to buy other goods and services.*)
10. Explain that money is useful because it makes trading easier. Hold up some Jacs, some U.S. dollars, and some currency from another country. Note that Jacs were used as money in the classroom, U.S. dollars are used as money in the United States, and the other currency is used as money in its country. Discuss the following:
- Why isn’t there only one kind of money in the world? (*Answers will vary. Focus the discussion on the fact that money must be acceptable to all traders as Jacs were in the trading simulation. Traders in one country are usually willing to accept their country’s money.*)
 - Why might people in a country prefer that their country have its own money? (*National pride and identity are very important to people. They want a money that represents their country. They want the words on the money to be in their native language. They want the money to depict images that are familiar, such as famous leaders, important buildings or landmarks, and national symbols.*)
11. Point out that people also want their country’s national money to remain valuable. Hold up the Jacs, U.S. dollar, and foreign money that you have. Discuss the following:
- What is the money made of? (*Paper*)
 - How many of you have paper in your desk? (*All*)
 - Would stores at the mall accept loose leaf or notebook paper in payment for goods and services? (No) Why? (*It isn’t valuable for exchange. People can’t use paper to buy other goods and services.*)
 - What would happen if, beginning tomorrow, stores accepted loose leaf paper and notebook paper? (*People all over the country would have a lot more money to spend on goods and services. The money would have less value.*)

12. Explain that one reason money is valuable is because it is relatively scarce. In the United States and other countries, governments control the amount of money available so that it remains valuable. If another country or government controlled the amount of money in the United States, they could create so much money that it would be as useless for exchange as notebook paper. Historically, money was developed for trade among people living in the same village, region, or country. As a result, it is traditional for each country to have its own money. Over time, however, the amount of international trade (people making trades with people outside their country) has increased. Trade among different countries is more difficult because each country has its own money.
13. Ask the students if they have heard of the European Union. (*Answers will vary.*) Explain that many countries in the European Union, such as Austria, France, Greece, Germany, Italy, and Spain, agreed to make trade between people in their countries as free and easy as possible. Have students locate these countries on a map. Explain that in order to achieve the goal of making trade easier, these countries formed the European Union. Many of these countries agreed to use one money, which they call euros.
14. Explain that people in Canada, the United States, and Mexico also want to make trade easier. One way this could happen is to have one money that all three countries use. Divide the class into groups of 4-5 students. Have each group create a name for this new money and draw a sample of how it might look. Remind the students that the name “euro” reflects the name of the organization of countries. Point out that money usually has symbols and pictures that have some meaning for the people who use the money. Explain that members of each group should be able to explain the significance of their money’s name and why they have included the pictures and symbols on the new money they’ve designed.
15. When groups have completed their work, allow them to share their creations with the class. Display the groups’ monies on a wall in the classroom.
16. Show Explore Economics Video Series, Episode 3: “What Makes Something Useful as Money?” (3-minute video); <https://www.stlouisfed.org/education/exploring-economics-vid-eo-series/episode-3-what-makes-something-useful-as-money>.

Closure

17. Discuss the following to emphasize the major points of the lesson:
 - What is barter? (*Trading goods and services for other goods and services without using money*)
 - What is money? (*Anything widely accepted in exchange for goods and services*)

- Why do people use money? (*It makes it easier to trade. Multiple trades aren't necessary with money. People will accept it because they know other people will, in turn, accept it from them.*)
 - What helps make money acceptable to other people? (*People easily recognize it, and it must be scarce enough to have value in exchange.*)
 - Do countries all use the same money? Why? (*No, because of national pride, desire to control the value of their money, and the fact that trading was more regionally defined within countries in the past*)
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Assessment

18. Distribute a copy of *Handout 8-4: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. Money is important because
 - a. it is made of gold.
 - b. *it makes trading easier.*
 - c. people cannot trade without it.
 - d. it satisfies people's wants better than goods and services can.
2. What money is used by everyone in the world?
 - a. Gold
 - b. Euros
 - c. U.S. dollars
 - d. *None, there are many different monies in the world.*
3. Which of the following would be most acceptable to U.S. producers in exchange for their goods?
 - a. Euros
 - b. *U.S. dollars*
 - c. Australian dollars
 - d. Rubles (the money of Russia)

Short Answer

4. Exchanges are increasingly being made with electronic transfers from one person's account to another's—no paper money is exchanged. What might explain why this is happening?

Money makes trading easier. Transferring electronic impulses is quicker and easier than transferring paper. So electronic money makes trading even easier than paper money does.

5. What would happen to trading if every state in the United States had its own money?

If each state had its own money, trading and travel in the United States would be much more difficult. People would have to exchange their state's money for another state's money in order to trade. If someone worked in one state and lived in another, he or she would constantly have to exchange currency. It would be time consuming and inefficient.

Extension

19. Post a world map on a bulletin board. Have students bring examples of other countries' money. Display each piece of money on the wall around the map. Use string or yarn to connect each piece of money to its country on the map. Provide students with an outline map of the world. Ask them to color in each country for which the class has a sample of money. Challenge students to find as many monies as they can by asking their parents, relatives, and friends.

Handout 8-1: Vendor Cards (page 1 of 2)

VENDOR 1

HAVE: Baseball card

WANT: Earbuds or medium pizza

VENDOR 2

HAVE: Medium pizza

WANT: Puzzle or haircut

VENDOR 3

HAVE: Earbuds

WANT: Board game or flash drive

VENDOR 4

HAVE: Puzzle

WANT: Colored pencils or movie ticket

VENDOR 5

HAVE: Haircut

WANT: Soccer ball or stuffed animal

VENDOR 6

HAVE: Board game

WANT: Comic book or apples

VENDOR 7

HAVE: Flash drive

WANT: T-shirt or ice cream

VENDOR 8

HAVE: Colored pencils

WANT: Soft drink or baseball card

Handout 8-1: Vendor Cards (page 2 of 2)

VENDOR 9

HAVE: Movie ticket

WANT: Soft drink or medium pizza

VENDOR 10

HAVE: Soccer ball

WANT: Earbuds or DVD

VENDOR 11

HAVE: Stuffed animal

WANT: Haircut or board game

VENDOR 12

HAVE: Comic book

WANT: Flash drive or colored pencils

VENDOR 13

HAVE: Apples

WANT: Movie ticket or soccer ball

VENDOR 14

HAVE: T-shirt

WANT: Stuffed animal or comic book

VENDOR 15

HAVE: Ice cream

WANT: Apples or T-shirt

VENDOR 16

HAVE: Soft drink

WANT: Ice cream or baseball card

Handout 8-2: Customer Cards

CUSTOMER 1

HAVE: Comic book

WANT: Apples

CUSTOMER 2

HAVE: Puzzle

WANT: Soft drink

CUSTOMER 3

HAVE: Soft drink

WANT: Board game

CUSTOMER 4

HAVE: T-shirt

WANT: Earbuds

CUSTOMER 5

HAVE: Flash drive

WANT: Comic book

CUSTOMER 6

HAVE: Movie ticket

WANT: Medium pizza

CUSTOMER 7

HAVE: Puzzle

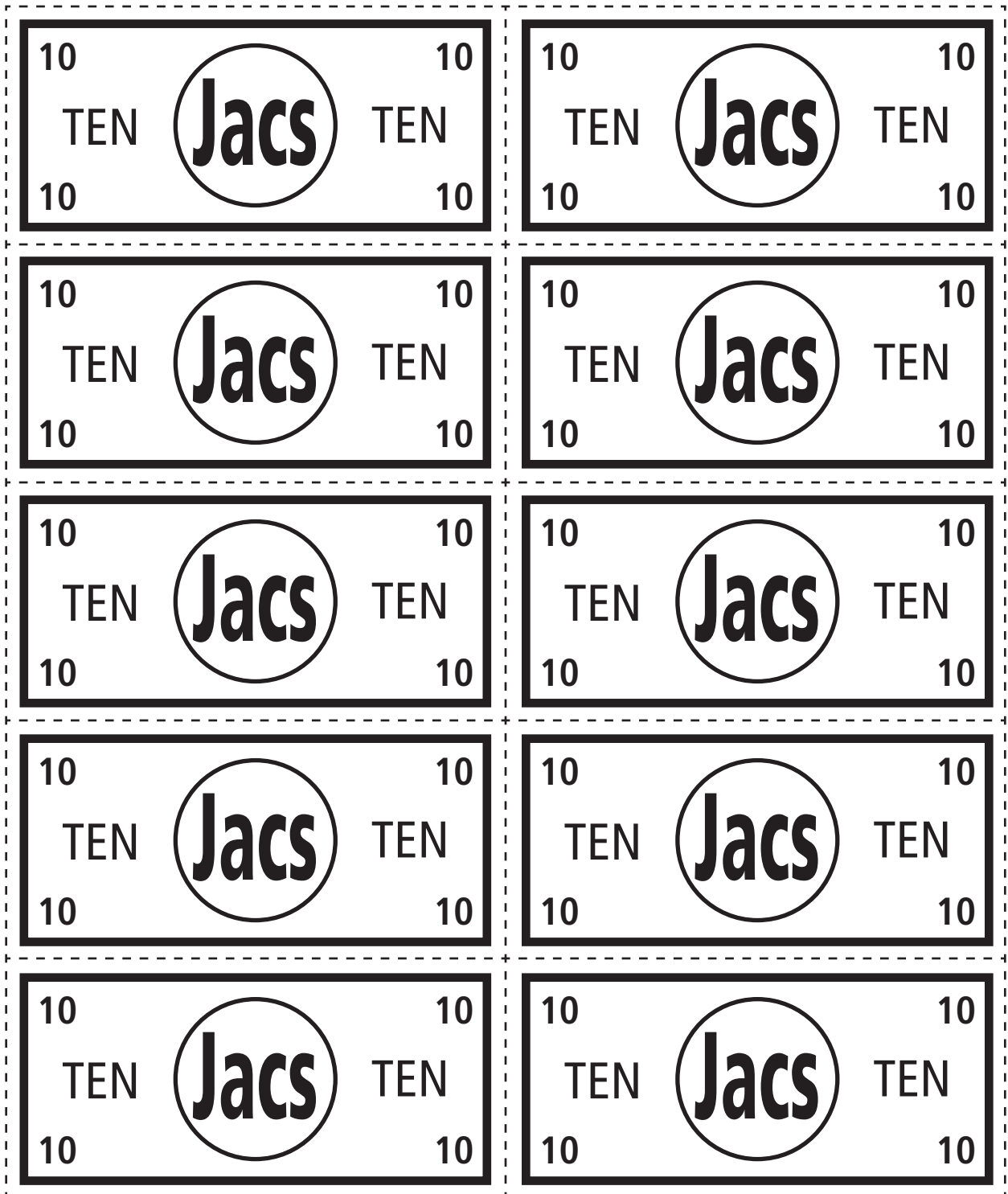
WANT: Haircut

CUSTOMER 8

HAVE: Baseball card

WANT: Soccer ball

Handout 8-3: Jacs



Handout 8-4: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. Money is important because
 - a. it is made of gold.
 - b. it makes trading easier.
 - c. people cannot trade without it.
 - d. it satisfies people's wants better than goods and services can.
2. What money is used by everyone in the world?
 - a. Gold
 - b. Euros
 - c. U.S. dollars
 - d. None, there are many different monies in the word.
3. Which of the following would be most acceptable to U.S. producers in exchange for their goods?
 - a. Euros
 - b. U.S. dollars
 - c. Australian dollars
 - d. Rubles (the money of Russia)

Short Answer

Directions: Answer each of the following questions using complete sentences.

4. Exchanges are increasingly being made with electronic transfers from one person's account to another's—no paper money is exchanged. What might explain why this is happening?

5. What would happen to trading if every state in the United States had its own money?

Standards and Benchmarks

National Content Standards in Economics

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 4**
 1. Exchange is trading goods and services with people for other goods and services (called barter) or for money.
 2. The oldest form of exchange is barter, the direct trading of goods and services between people.
 3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more informal exchanges of favors and courtesies.
- **Benchmark: Grade 8**
 1. When people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.

Standard 11: Money and Inflation

Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services. The amount of money in the economy affects the overall price level. Inflation is an increase in the overall price level that reduces the value of money.

- **Benchmarks: Grade 4**
 1. Money is anything widely accepted as final payment for goods and services.
 2. Money makes trading easier by replacing barter.

A Yen to Trade

Lesson 9: The Road to Riches

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Standards and Benchmarks (see page 9.10)

Lesson Description

Students move a tennis ball around the room, learning that the way people move themselves and things around determines the location of trade routes. They also see how changes in the way people and goods are transported changes trade routes and even trading partners.

NOTE: The activity in the lesson is most effective if students are spread around a room where there are the following: obstacles or space for inserting obstacles such as tables; slopes in the floor; or even different levels (such as steps or a stage). Because this may be challenging, the activity could be done outdoors on the playground. It might be useful to enlist the help of the physical education teacher. Students could stand or sit in various areas of the playground such as the top of a slide, on a set of steps, or along a sloped sidewalk. The obstacles are intended to represent natural geographical barriers such as mountain ranges, thick forests, and deserts.

Grade Level

6-8

Concepts

Barter
Technology
Trade
Trade routes

Objectives

Students will be able to

- define barter, technology, trade, and trade routes;
- explain that the way in which people and goods can be moved determines trade routes; and
- describe why improvements in transportation technology lead to increased amounts of trade.

Compelling Question

How has transportation technology improved trade?

Time Required

45-60 minutes

Materials

- Visual 9-1, one copy for each teacher to record the number of trades (Optional: Use a document camera to display Visual 9-1 as the teacher records trades)
- Handout 9-1, one copy for each student
- Tennis ball
- Two plastic butter/margarine tubs or small plastic bowls
- A 12" ruler
- Link to Explore Economics Video Series, Episode 2: "The Economics of Transportation" (90-second video); <https://www.stlouisfed.org/education/exploring-economics-video-series/episode-2-the-economics-of-transportation>

Procedure

1. Explain that as an introduction to this activity, students will view a video—"The Economics of Transportation"; <https://www.stlouisfed.org/education/exploring-economics-video-series/episode-2-the-economics-of-transportation>.
2. Explain that transportation is a form of **technology**—the application of knowledge to the production of goods and services. When people produce new ways to transport goods and services, they are applying transportation technology.

3. Explain that **trade** is the exchange of resources, goods, or services for other resources, goods, or services, or for money. When people engage in trade, they are trading. When people trade goods and services without using money it is called **barter**. Discuss the following:
 - What are some examples of transportation technology you saw in the video? (*Answers may include airplanes, feet, animals, carts, wagons, boats, ships, trains, cars, trucks, and drones.*)
 - What are some examples of trades you have made? (*Answers will vary but may include traded sandwiches with a friend at lunch or paid to play a video game at an arcade.*)
 - Ask a student to explain why he or she was willing to trade. (*Answer may include wanted the friend's sandwich more than the sandwich brought from home or wanted to play the video game more than he or she wanted the money or something else that could be purchased with the money.*)

4. Explain that people trade because they expect to be happier or more satisfied after the trade. In fact, people are only willing to trade if they expect to get more from the trade than what they give up. Because this is true for all traders, both sides involved in a trade expect to be better off after the trade—trade is a good thing. Unfortunately, people may not be physically close to each other, so trading may be difficult.

5. Tell the students that they will participate in a trading activity. Each student will have an opportunity to trade with others in the class. To complete a trade, a student must get a tennis ball to a classmate. The goal is to complete as many trades as possible. Work through the following:
 - Select 3 or 4 students to act as traders and bring them to the front of the room. Explain that they may trade with any classmate, but they are allowed to only move the tennis ball in a specific manner. Have each trader start on the same spot. Have the other students stand near their desks.
 - Demonstrate the method of trading by placing two plastic bowls next to and touching one another at your feet. Place the tennis ball in the dish closest to you. Pick the ball up and move it to the second dish. Then move the first dish to the other side of the second dish. The two dishes must still touch. Now move the ball to the empty dish. Move the newly emptied dish to the other side of the dish with the ball in it.
 - Explain that a student trader should continue moving the ball in this manner until he or she reaches the feet of a classmate. This is a completed trade. The student may continue toward other classmates, making trades until the given time expires. Optional: select a student to be the timer.
 - Place the tubs and ball at the feet of one trader. Allow this trader one minute to move the ball.

6. At the end of one minute, display a copy of *Visual 9-1: Transporting the Tennis Ball* and record the number of trades made and the names of the students with whom trades were completed. Also, discuss the route(s) taken at the end of each round. NOTE: If this activity is taking place outside of the classroom, record the information on a paper copy of Visual 9-1 and display it for discussion later.
7. Repeat step 5 with the other traders. They may use the same route(s) taken by earlier traders or other routes. Then, work through the following:
 - Bring 3 or 4 new traders to the front of the room. Explain that this time the tennis ball may be moved only by pushing it along the floor with the ruler. Make sure each trader starts at the same spot. When the trader reaches a classmate, the trade is complete. The trader may then continue toward other classmates, making trades until time expires.
 - Give each trader one minute to trade and then record the number of trades and names of students with whom trades were completed, and then discuss routes taken after all traders in the round have gone.
 - Now bring 3 or 4 new traders to the front of the room. Tell them that this time the tennis ball may be moved only by tossing it (gently) underhand to other students. The receiving student must toss the ball back to the trader to complete the trade. The trader continues trading by tossing the ball to another student, and so on. Allow students to toss the ball for one minute while counting each catch. Record each catch as a completed trade. If time allows, continue until every student has had a chance to be a trader.
8. After the final trader completes his or her turn, explain that **trade routes** are the paths traders use to reach the people with whom they are trading or to send the goods and resources they are trading. Examples of trade routes include jungle pathways, caravan routes, waterways (rivers, lakes, oceans), roads/interstate highways, airways (flight paths of airplanes), and so on. Refer to Visual 9-1 and discuss the following:
 - How did the trade routes differ each round? (*Answers will vary. Routes will get longer each round.*)
 - Why were the particular trade routes chosen by classmates? (*They most likely went to those students who were the easiest [least-costly in terms of time] to get to; those students who were the closest; or those who could be reached without going around too many obstacles.*)
9. Remind the students that technology is the application of knowledge to the production of goods and services. Every method or way in which something is done uses some type of technology. In the activity, the tennis ball was moved in three different ways. Each of these is a different “moving” or transportation technology. Discuss the following:
 - What was the technology used to move the ball in each trading round? (*Moving from bowl to bowl, pushing, tossing*)

- What happened to the number of trades as the technology changed (improved)? (*Traders were able to make more trades because they could reach more people in the same amount of time.*)
 - How did the trade routes change as a result of the change in technology? (*In each successive round, new trade routes brought trade to people who weren't reached before. Trade was more direct [shorter routes].*)
10. Tell the students that in the real world, as the technology of moving people and things around has improved, trade routes have changed and the amount of trading activity has increased. Explain the following:
- At first, the only way of getting around was by foot, animal, or small boat. (In the trading activity, this was represented by the “step-by-step” movement of the tennis ball in the tubs.) Trade routes were waterways and easy-to-travel paths (not over mountain tops or across deserts).
 - When engines were developed for locomotion, roads and railways became the new trade routes. (In the trading activity, this was represented by pushing the tennis ball along.) This made it possible to reach more people more easily and to move larger quantities of goods at one time.
 - When flight became possible, airways became the new trade routes. This eliminated many of the geographical barriers found on land and water routes. (In the trading activity, this was represented by tossing the tennis ball. It was possible to toss the ball over obstacles, such as desks or steps.)

Closure

11. Review the following to emphasize the major points of the lesson:
- What is trade? (*Trade is the exchange of resources, goods, or services for other resources goods, or services, or for money.*)
 - What are trade routes? (*Trade routes are the paths on land, on water, or through the air that people use to reach those with whom they are trading or to send the goods and resources they are trading.*)
 - Why would one route be chosen over another? (*It is shorter, or it takes less time to travel because there are fewer obstacles. Traders are going to use the least-costly route they can find given the geography and the nature of the transport technology.*)
 - What is technology? (*Technology is the application of knowledge to the production of goods and services.*)
 - When talking about transportation of goods and services, what does technology mean? (*In this case, technology is the way in which goods and resources are transported.*)
 - Give some examples of transportation technologies. (*People carrying goods; animals carrying goods; boats, ships, cars, trucks, railroads, or planes transporting goods*)

- Why are new technologies developed? (*People are always looking for a better, cheaper way of doing things.*)
 - How has transportation technology affected trade? (*It has made it faster and easier to move goods and services, making trade easier.*)
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Assessment

12. Distribute a copy of *Handout 9-1: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. Which of the following are the oldest trade routes?
 - a. Railways and highways
 - b. Highways and airways
 - c. *Pathways and waterways*
 - d. Routes to other planets
2. As the technology of transportation improves,
 - a. *more trades occur.*
 - b. trade routes stay the same.
 - c. trade routes become more difficult.
 - d. trade becomes more expensive.
3. Which of the following is a trade route?
 - a. The road from where you live to the nearest mall
 - b. The highway from your city to New York City
 - c. The flight path an airplane would take from New York City to London
 - d. *All of the above*

Short Answer

4. How has transportation technology changed the way we trade?
New technology allows us to move goods and services more easily and more quickly. This has made trade easier.
5. As travel to other planets becomes possible, how are trade routes likely to develop, and what will be the consequences for trade?

Much like the world's first trade routes, which needed to go in such a way that water and food supplies could be replenished, interstellar travel may need to pass by planets where it is possible to replenish basic supplies, including energy. The direction of the trade route would also be toward the nearest habitable planets where trade would be possible. Because trade is desirable to all traders, trade will increase if other planets become successful.

Extension

13. Have students investigate a particular trade route or routes at a particular time in history. The following are some examples:

- Silk Road of Central Asia
- Ocean routes to the Americas in the 1700s
- Erie Canal
- Interstate highway systems in the United States
- Railway system of any European country
- Route map of a major airline
- Road map of a city or state
- Oregon Trail of the 1800s
- Transcontinental railroad (such as Canadian, Trans-Siberian, first U.S.)
- Panama Canal
- Paths/roads of the Mayans, Incas, Aztecs, or a Native American tribe

Have students answer the following questions about the trade route they select:

- Who was involved in the trade?
- What kinds of goods were traded?
- What geographical obstacles did the route have to pass through or around?
- Is the route still used today?

Standards and Benchmarks

National Content Standards in Economics

Standard 15: Economic Growth

Investment in factories, machinery, new technology, and in the health, education, and training of people stimulates economic growth and can raise future standards of living.

- **Benchmarks: Grade 8**

3. Technological change results from an advance in knowledge leading to new and improved goods and services and better ways of producing them.
4. Increases in productivity can result from advances in technology or increases in physical or human capital.

A Yen to Trade

Lesson 10: Trade Connections

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Standards and Benchmarks (see page 10.11-10.12)

Lesson Description

Students wear clothing and bring goods from other countries for an International Goods Day. Students review basic ideas about international trade from previous lessons.

Grade Level

6-8

Concepts

Goods
International trade
Trade

Objectives

- Students will be able to
- define goods, international trade, and trade; and
 - explain how international trade connects people of different countries.
-

Compelling Question

Why do people trade?

Time Required

Day 1: 5-10 minutes
Day 2: 30-45 minutes

Materials

- Visual 10-1, one copy for the teacher to display
 - Handouts 10-1, 10-2, and 10-3, one copy of each for each student
 - Wall map of the world or an online world map (<https://geology.com/world/world-map.shtml>; <https://www.mapsofindia.com/worldmap/clickable-world-map.html>)
-

Procedure

Day 1

1. Explain that **goods** are objects that satisfy people’s wants and that international goods are imports to the United States. An import is a good or service produced abroad but sold domestically. People in this country trade goods from this country to get goods from people in other countries. **Trade** is the exchange of resources, goods, or services for other resources, goods, or services, or for money; and **international trade** is trade between different countries.
2. Tell the students that their class will have an “International Goods Day.” On this day, each student should (1) wear an article of clothing made in another country; (2) bring a good other than clothing that was made in another country; and (3), if possible, bring a souvenir purchased on a trip to another country that represents something special or unique about that country. Encourage students to look for items from two different countries. Distribute a copy of *Handout 10-1: International Goods Day Letter* to each student and tell them to share it with a parent or guardian.

Day 2

1. Draw two columns on the board. Label the first column “Country” and the second column “Good.” Invite each student to show what he or she has worn and brought. Have students explain the significance of any souvenirs they may have brought. As students show their clothing and goods, record the information in the table.
2. After all the students have shown their goods, distribute a copy of *Handout 10-2: Trading Countries and World Regions* to each student. Refer to the first country listed in the table on the board and have a student locate the country on a world map. Tell him or her to identify in which world region the country is located. Then have all students list that country next to the region on Handout 10-2 and place a tally mark in the “Number of goods” column.
3. When the class has completed Handout 10-2, discuss the following, telling the students they may refer to the table on the board and the information on Handout 10-2:
 - From which areas or regions of the world did many of the items come? (*The answers are likely to be Asia and Central America.*)

- From which areas or regions of the world did the fewest items come? (*There are probably not many items from South America or Africa.*)
 - Why do you think there are so few items from these regions? (*Answers will vary.*)
4. Explain that there are some countries from which people in the United States don't import many goods. This may occur because people in those countries tend to export more natural resources, such as oil, and don't tend to export many goods. It may also occur because people in these countries do not produce goods that people in the United States want at this time. There are also some countries and regions from which the people in the United States buy many goods. Point out that the five countries with which the United States trades the most (our main trading partners) are Canada, China, Germany, Japan, and Mexico.
 5. Explain that trade connects people around the world. Americans consume goods that were produced in other countries, and people in other countries consume goods that were produced in the United States. People developed faster ways to move goods and resources and better methods of communication. As a result, it is easier for people from different countries around the world to trade with each other.
 6. Ask the students what they learned from their classmates today about the people and customs of other countries. (*Answers will vary, but students probably learned some things when their classmates explained the significance of the souvenirs they brought.*) Point out that when people trade with people from other countries, they can learn a lot about a country, its people's resources, and their customs.
 7. Display *Visual 10-1: International Trade* and discuss the basic ideas of trade as follows:
 - **People gain from voluntary trade.** Ask the students to give an example of a voluntary trade they've made and to explain how both traders gained from the exchange (Lesson 2: Let's Make a Deal). (*If someone traded one baseball or other trading card for another, each trader is happier with the new card than they were with the old. If someone bought a new pair of jeans, the consumer has an attractive and useful piece of clothing to wear, and the store owner has received money for the jeans.*)
 - **People should specialize in producing those goods they can produce at a lower opportunity cost.** Ask the students to identify an example of specialization at home among family members or in school among teachers or staff to explain why this specialization results in a lower opportunity cost (Lesson 3: The Tortoise and the Hare). (The music teacher specializes in the music area. The classroom teacher is able to specialize in a content area(s). This reduces the cost for both the music teacher and the classroom teacher—neither must spend time preparing lessons in different areas of study, which would be time consuming.)
 - **When people specialize and trade, they can get more from the same amount of resources.** Remind the students that as Aquans and Terrans (Lesson 5: Tricks of the

Trade), they specialized and traded pies and brownies. As a result, both Aquans and Terrans had more pies and brownies to consume.

- **Exports are goods traded out of a country, while imports are goods brought into a country.** Ask the students for examples from today's activity. (*Answers will vary.*) Ask them for examples of goods or resources that the United States exports. (*Corn, soybeans, cars, airplanes, computers, oil*)
- **Trade barriers reduce the amount of trading and the gains that are possible from trade.** Remind the students that in the jumping and hurdling activity (Lesson 7: Trading Hurdles) and the tennis ball activity (Lesson 9: The Road to Riches) they encountered barriers to trade. Point out that mountains, deserts, high winds, and high seas were examples of geographic barriers to trade. Tariffs, quotas, and government standards and regulations were government-imposed barriers to trade. Discuss the following:
 - What is a tariff? (*A tax on imported goods*)
 - What is a quota? (*A limit on the quantity of a good that can come into a country*)
- **Money makes trading easier.** Remind the students that money is anything that is generally accepted in exchange for goods and services (Lesson 8: Pieces of Paper).
- **People in different countries use different monies, so these must be exchanged before goods may be traded.** Ask the students why merchants in the United States are willing to accept U.S. dollars but not Japanese yen for goods and services (Lesson 1: Ringgits, Rupees, and Rials). (*U.S. merchants know they can use dollars to buy other goods and services in the United States; however, they cannot use yen.*)
- **Trade routes change as the way people and goods can be transported changes.** Remind the students that technology is the application of knowledge to the production of goods and services. Transportation technology is the way in which we move goods and services. Ask the students for examples of how the technology of transportation has changed (Lesson 9: The Road to Riches). (*From people carrying goods; to animals carrying goods; to boats, ships, and wagons carrying goods; to trains, trucks, and planes carrying goods*)

8. Discuss the following:

- Have you heard the expression, "It's a small world"? (*Students may have heard the expression used, or they may have heard it as part of a refrain to a song with a similar title.*)
- What do you think this expression means? (*Answers will vary. Guide students to recognize that this expression is used when an event occurs that suggests you can meet others and know people from all over the world. For example, if a person travels out of the country and meets someone from their neighborhood in that country, they might say, "It's a small world."*)
- How does trade make it a small world? (*When we trade, we use goods and services from other places. It seems as though we are closer to other parts of the world as a result. We may also learn about the goods and resources used in other countries.*)

Closure

9. Discuss the following to emphasize the major points of the lesson:
- Why do people engage in voluntary trade? (*They expect to gain from trading.*)
 - In what production should people specialize? (*They should specialize in producing the goods and services they can produce at the lowest opportunity cost.*)
 - How can people produce and consume more goods and services from the same amount of resources? (*By specializing and trading*)
 - What is an export? (*A resource, good, or service that is produced domestically but sold abroad*)
 - What is an import? (*A resource, good, or service that is produced abroad but sold domestically*)
 - What are some examples of trade barriers? (*Tariffs, quotas, embargos, standards, geographic barriers*)
 - What is the impact of trade barriers? (*They reduce trade and the gains possible from trade.*)
 - Why do people use money to trade? (*It makes trading easier.*)
 - If people want to buy goods and services from another country, what must they do? (*Exchange currency*)
 - What is technology and how does it affect trade? (*Technology is the application of knowledge to the production of goods and services. Technology changes the way people move goods and services, which changes trade routes.*)

Assessment

10. Distribute a copy of *Handout 10-3: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. Which of the following is not an example of international trade?
 - a. You buy shoes made in China.
 - b. A girl in Japan buys a watch made in Japan.
 - c. A boy in Brazil buys a skateboard made in the United States.
 - d. Your parents buy a sombrero during their trip to Mexico.

2. Which of the following makes trade more difficult?
 - a. Money
 - b. Trade barriers
 - c. Faster ways to move people and things around
 - d. Better ways for people to communicate with one another
3. Which of the following countries is not a main trading partner of the United States?
 - a. Mexico
 - b. Canada
 - c. Japan
 - d. Spain

Short Answer

4. How has international trade made the world seem “smaller”?

Through international trade, people have goods and resources from other countries. As a result, they are connected to those countries. Before there were large amounts of goods traded internationally, a good from, say, Japan would have been exotic, unusual, and difficult to acquire. Now goods from Japan and all over the world are available at the local grocery store or service station and are placed on shelves next to goods made in the United States. It's as if foreign producers are as close as U.S. producers.

5. How has technology changed trade?

As technology has changed, we are able to move goods, resources, and people more quickly from one place to another, so trade is easier and less expensive. As trading becomes easier, we trade more.

6. Why do people trade? Use an example to explain.

People trade because they want something that other people have more than they want the things they already have. People expect to be better off/happier after trading than they were before trading. For example, if I buy a ticket to the movies, I expect to enjoy the movie more than I would enjoy something else that I could have bought with the ticket money.

Visual 10-1: International Trade

1. People gain from voluntary trade.
2. People should specialize in producing those goods they can produce at a lower opportunity cost.
3. When people specialize and trade, they can get more from the same amount of resources.
4. Exports are goods traded out of a country, while imports are goods brought into a country.
5. Trade barriers reduce the amount of trading and the gains that are possible from trade.
6. Money makes trading easier.
7. People in different countries use different monies, so these must be exchanged before goods may be traded.
8. Trade routes change as the way people and goods can be transported changes.

Handout 10-1: International Goods Day Letter

Dear Parent/Guardian:

As the final activity in our international trade unit, our class is having an International Goods Day. This event is planned for _____.

For this event, each child should (1) wear an article of clothing made in a country other than the U.S.; (2) bring a good, other than clothing, that was made in a country other than the U.S.; and (3), if possible, bring a souvenir purchased on a trip to another country that represents something special or unique about that country. Please encourage your child to look for items from two different countries.

Thank you for your help in making our International Goods Day a success.

Sincerely,

Handout 10-2: Trading Countries and World Regions

Regions	Countries	Number of goods
Africa		
Asia		
Australia		
Central America		
Europe		
North America		
South America		

Handout 10-3: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

- Which of the following is not an example of international trade?
 - You buy shoes made in China.
 - A girl in Japan buys a watch made in Japan.
 - A boy in Brazil buys a skateboard made in the United States.
 - Your parents buy a sombrero during their trip to Mexico.
- Which of the following makes trade more difficult?
 - Money
 - Trade barriers
 - Faster ways to move people and things around
 - Better ways for people to communicate with one another
- Which of the following countries is not a main trading partner of the United States?
 - Mexico
 - Canada
 - Japan
 - Spain

Short Answer

Directions: Answer the questions below using complete sentences.

- How has international trade made the world seem "smaller"?
- How has technology changed trade?
- Why do people trade? Use an example to explain.

Standards and Benchmarks

National Content Standards in Economics

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 4**
 1. Exchange is trading goods and services with people for other goods and services (called barter) or for money.
 3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more informal exchanges of favors and courtesies.
- **Benchmarks: Grade 8**
 1. When people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.
 4. Despite the mutual benefits from trade among people in different countries, many nations employ trade barriers to restrict free trade for national defense reasons, to protect key industries or because some companies and workers are hurt by free trade.
 5. Imports are foreign goods and services that are purchased from sellers in other nations.
 6. Exports are domestic goods and services that are sold to buyers in other nations.
 7. Voluntary exchange among people or organizations gives people a broader range of choices in buying goods and services.

Standard 6: Specialization

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

- **Benchmarks: Grade 4**
 1. Economic specialization occurs when people concentrate their production on fewer varieties of goods and services than they consume.
 4. Greater specialization leads to increasing interdependence among producers and consumers.
- **Benchmark: Grade 12**
 1. Individuals and nations have a comparative advantage in the production of goods or services if they can produce a product at a lower opportunity cost than other individuals or nations.

Standard 11: Money and Inflation

Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services. The amount of money in the economy affects the overall price level. Inflation is an increase in the overall price level that reduces the value of money.

- **Benchmark: Grade 4**

1. Money is anything widely accepted as final payment for goods and services.

Standard 15: Economic Growth

Investment in factories, machinery, new technology, and in the health, education, and training of people stimulates economic growth and can raise future standards of living.

- **Benchmarks: Grade 8**

3. Technological change results from an advance in knowledge leading to new and improved goods and services and better ways of producing them.
4. Increases in productivity can result from advances in technology or increases in physical or human capital.