

CHIPS OF TRADE



People
and the
Planet

Lessons for a Sustainable Future

INTRODUCTION

The Earth is a finite system with limited resources that people must compete for and share. The more people there are on the planet, the smaller each person's share of resources. But resources are not divided equally amongst all the world's countries. Some countries are rich in **natural resources**, like minerals, fossil fuels and timber, while others are not. International **trade** is based on the imports and exports of these natural resources and of the items that are manufactured from them. Countries with more resources to export are in a better financial position to import the resources they lack. For poor countries with few resources to export, it is difficult to afford the resources they need to import. Population growth compounds this trade deficit. As a country's population grows, the demand for more resources grows too.

MATERIALS

- Poker chips
- Yarn or masking tape

PART 1: LET THE CHIPS FALL

PROCEDURE

1. Before class, count out poker chips so you have exactly twice as many chips as the number of students participating in the activity. If possible, use an equal number of red, white and blue chips.
2. Use yarn or masking tape to mark off a 12 feet x 12 feet space.
3. Spread the chips out within the marked off area at random.

CONCEPT

Population growth impacts countries differently depending on their resource base. This can also impact countries' ability to trade.

OBJECTIVES

Students will be able to:

- Describe how resources are inequitably distributed throughout the world.
- Explain the connection between a growing human population and possible effects on resource distribution.
- Analyze real-world import/export data from four countries.

SUBJECTS

Social studies (economics, geography)

SKILLS

Observing, comparing and evaluating, critical thinking, analyzing data

METHOD

Acting as countries in a simulation game, students discuss how resources are inequitably distributed throughout the world and how this imbalance motivates trade.

2. Have students imagine that each chip color represents a different kind of resource. Does each country have a large and well-balanced resource base (three chips of three different colors)?
 - a. If you don't have a well-balanced resource base, what could you do to improve your situation?

You could trade with other countries to get the resources you need.

- b. How does Group 1's ability to export resources affect their wealth and well-being?

With more to export, Group 1 is able to bring in more revenue for the country and have more purchasing power for goods they want to import from other countries.

- c. How does Group 4's dependence on the resources of other countries affect their wealth and well-being?

With fewer resources to sell, Group 4 brings in little revenue in which to purchase goods from other countries. This increases the cycle of poverty.

3. Based on the resources you have, would you like to see your country's population increase, decrease, or stay the same? Why?

Answers will vary. Countries with a lot of resources might feel they are able to support a population increase, while countries with fewer resources may prefer for their population to stay stable or decrease.

4. As a country's leader, how does knowing the population of your country help you plan for the future? Consider what would happen if your population became much bigger. Much smaller?

If your population becomes larger, you might need to import more goods to provide for the needs of more people. If your population shrinks, it may be challenging to create enough goods to export, especially if there is a shrinking labor pool.

PART 2: WHAT'S A COUNTRY WORTH?

PROCEDURE

1. The chart on page 6 provides four countries as examples that would fall into each group. Share the chart with your class by projecting it or making photocopies.

Note: You may notice that in Canada, several exports and imports are the same (crude and refined petroleum). The [Canada Energy Regulator](#) provides the following explanation: "Canada is a net exporter of crude oil, meaning it exports more than it imports each year. While Canada produces more oil than required to meet its domestic refining needs, some refineries import crude oil for a variety of reasons, such as lack of pipeline access to domestic supplies, specific feedstock requirements for their refinery, or for economic reasons."

2. Go over the Discussion Questions as a class.

DISCUSSION QUESTIONS

1. You'll notice that Canada and Colombia export approximately the same amount as they import. However, this isn't the case with Nepal and Burundi. How can a country afford to import more than it exports?

The country may borrow money from other countries in order to purchase the items they need but potentially leaving them with large amounts of debt. The government of a country could raise funds from the citizens through various taxes.

2. What appears to be the relationship between a country's ranking in exports with their ranking in imports?

A country that exports a lot has the financial resources to import a lot of goods, so their ranking is high for both. Similarly, the lower a country's ranking as an exporter, the fewer dollars available to import goods.

3. There is a large difference among the worth of each country's exports. Ask the students to calculate the amount of exports per capita for each country.

Canada: \$12,495; Colombia: \$769; Nepal: \$59; Burundi: \$24

4. How is the per capita share of exports impacted by the size of the country's population?

The larger the population, the smaller the share per person.

5. How might the population growth rate affect a country's resources?

The higher the rate of population growth, the fewer resources there are to go around. More resources need to be mined/produced/grown in order to provide for more people. The amount of non-renewable resources will decrease as more people are using them. Some people may go hungry/thirsty, lack shelter, etc. if there aren't enough resources to support the additional people.

6. Aside from natural resources or manufactured goods to export, what other economic assets could provide a country with the purchasing power to import needed goods?

Answers may include tourism (for recreation and natural beauty) and services like banking. For example, The Cayman Islands is a thriving financial center and tourist destination, but must import 90 percent of its goods.

ASSESSMENT

Provide students with the following information on Nigeria (and show them Nigeria's location on a world map or globe). Students write a paragraph analyzing possible economic prospects for Nigeria based on this data for expected population growth and resources for trade.

Nigeria

Population (2021)	211 million
Growth Rate	2.5%
Expected population in 2035	295 million
Main Exports	Crude petroleum, natural gas, scrap vessels, flexible metal tubing, cocoa beans
Total worth of exports (USD)	\$40 billion
Per capita share of exports (USD)	\$189
World Ranking for Exports	63 rd
Main imports	Refined petroleum, cars, wheat, laboratory glassware, packaged medicines
Total worth of imports (USD)	\$72 billion
World Ranking for Imports	48 th

FOLLOW-UP ACTIVITY

The World Factbook is an excellent online resource administered by the Central Intelligence Agency (CIA) where students can find all sorts of data for every country, including data on population, exports, and imports. Send students to the link: <https://www.cia.gov/the-world-factbook/references/guide-to-country-comparisons/>. This page allows students to compare statistics between countries for various indicators. Have them click on the "Economy" tab on the left side, and then explore the "Exports" and "Imports" pages to discover which country leads the world in exports (China) and which country leads the world in imports (United States). Next, students can compare the populations of both countries by clicking the "People and Society" tab on the left side, and then clicking on "Population." While China's export amount is 24 percent larger than that of the U.S., its population is four times as large. Have students:

- Calculate the per capita export amount for these two countries.
- Find the leading exports and imports from each country and their main trading partners. (Students can find this information by exploring the country profiles, found here: <https://www.cia.gov/the-world-factbook/countries/>.)
- Determine which group would represent these countries in the chips activity.

	Group 1	Group 2	Group 3	Group 4	
Country	Canada	Colombia	Nepal	Burundi	World
Population	38.2 million	50.9 million	30.4 million	12.2 million	7.8 billion
Birth Rate	10	15	19	36	18
Death Rate	8	6	7	6	8
Growth Rate	0.2%	0.9%	1.2%	3.0%	1.0%
Main Exports	crude petroleum, cars and vehicle parts, gold, refined petroleum, wood	crude petroleum, coal, coffee and spices, gems and precious metals, plastic raw materials, live trees and cut flowers	palm oil, clothing and apparel, carpets, soybean oil, flavored water	gold, coffee, tea, raw earth metal ores, wheat flours	n/a
Total worth of exports (USD)	\$477 billion	\$39 billion	\$2 billion	\$290 million (\$0.290 billion)	\$17.3 trillion
Per capita share of exports					
World Ranking for Exports	14 th	65 th	158 th	201 st	n/a
Main Imports	cars and vehicle parts, delivery trucks, crude petroleum, refined petroleum, phones and computers	machinery, computers and other electronics, automobiles, refined fuel, plastic products, medicines	refined petroleum, iron, broadcasting equipment, natural gas, rice	refined petroleum, packaged medicines, cement, raw sugar, cars	n/a
Total worth of imports (USD)	\$510 billion	\$52 billion	\$11 billion	\$910 million	\$20.1 trillion
World Ranking for Imports	10 th	58 th	103 rd	192 nd	n/a

Sources: CIA World Factbook, 2021 estimates; Population Reference Bureau, 2021 World Population Data Sheet.