The Trading Game

The Trading Game[1] provides an active and engaging introduction to some of the key dynamics of trading relationships between different countries and regions. It incorporates information about trade in Canada in general and the Pacific Rim in particular. A debrief discussion at the end of the activity allows for students to reflect on the application of the game to the real world and on the benefits and challenges of global trade. The game is informed by the big idea of Interdependence.

The game can be played at the beginning of a unit on trade and the economy. It is also useful for a summary activity at the end of a lesson or unit of work. The debriefing discussion at the end of the game may be richer if the students already have some understanding of the main concepts of trade.

CLASSROOM TIME REQUIRED

45 – 60 minutes

INTRODUCTION

Our planet includes industrialized countries such as Canada, the United States of America, the members of the European Union, South Korea, Japan, Singapore and Australia. These countries have some of the highest standards of living in the world.

Other countries such as Brazil, China, Malaysia, Indonesia and India have large and growing populations, but the wealth of the countries may be less evenly distributed. Still other countries are poor and lack education, natural resources, transportation infrastructure, financial systems, or government policies that support international trade.

Finally, all countries are exposed to changing market conditions and the introduction of new technology that has an impact on the demand for and the supply of goods. This often leads to political pressure to try to protect industries that may be affected by the forces of change. However, change in economic conditions also brings with it opportunities.

The goal of the Trading Game is to demonstrate how trade between different countries actually works and who may benefit. It aims to help players understand how trade affects a country's prosperity. While it provides only a simple outline of some very complex relationships, one of its aims is to show some of the key factors that determine those relationships.

Before playing the game, the teachers should make a connection with students' understanding and experience of trading. Are there any forms of trade in which they or their families engage?

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[1] This activity is inspired by a game developed by the UK non-profit organization, Christian Aid. The original game can be accessed at: http://learn.christianaid.org.uk.

OVERVIEW OF THE GAME

- The teacher leads and controls the game. The students role-play different countries or country groups. The game also needs a banker. This could be another teacher, a parent or a student.
- As their country or country group, participants produce shapes out of paper. Each shape has a different value. The making of shapes from the paper represents the manufacture of products from raw materials.
- Groups sell their products (i.e. their paper shapes) to the banker. The aim of each group is to make as much money as possible.
- While manufacturing and trading occur, the teacher can change the terms of trade and create new trading situations that reflect real-life situations.
- The new terms of trade affect the way countries trade, either by stimulating an increase in trading or restricting a country's manufacturing capacity.
- When manufacturing and trading is finished, the teacher should guide a debriefing discussion. Participants share their experience of playing the game, consider how their role in the game reflected real-life world trading systems, and explore some of the ethical dimensions of international trade.

NUMBER OF PARTICIPANTS

The game works well with a group of 15 to 30 players. (It is possible to run two separate games simultaneously with a group of more than 30 players.)

AIMS OF THE GAME

- To illustrate how trade can benefit or impact the economic development of various countries, or trading blocs.
- To explain how trading relationships work.
- To enable players to experience unequal trading relationships.
- To generate interest and discussion about the world trading system.

RESOURCES REQUIRED

- 30 sheets of unlined letter size paper
- Several packs of play money, including 20 of the same denomination (e.g. $100)
- 70 identical stickers (e.g. stars)
- 4 pairs of scissors
- 4 rulers
- 2 compasses for drawing circles
- 2 triangles
- 2 protractors
- 12 pencils
- 1-2 large sheets of paper for the shape diagrams and rules (see *Attachments* below)
- 3 large manila envelopes

TEACHER PREPARATION

- Copy the shape diagrams and rules onto a board, or display them using a computer and projector or

Smart Board. (Students need to be able to these clearly throughout the game).

- Organize the tools and resources into the following sets, and place in envelopes:

Group A (two sets)	Group B (two sets)	Group C (two sets)
2 pairs of scissors	10 sheets of paper	4 sheets of paper
2 rulers	35 stickers	2 $100 bills
1 compass	2 $100 bills	2 pencils
1 triangle		
1 protractor		
1 sheet paper		
6 $100 bills		
4 pencils		

- Arrange the furniture so that each group has a flat working area and can move freely around the room.

HOW TO PLAY: TEACHER INSTRUCTIONS

(N.B. These are for the teacher's reference, and should not be read aloud to the students.)

- Split the players into groups as shown below:

Groups	Players per Group	Resource Set	Possible Countries
1-2	6	A	Canada Japan Mexico South Korea United States
3-4	5	B	Brazil China India Singapore Taiwan
5-6	4	C	Cambodia Indonesia Malaysia Thailand Vietnam

- Allocate each group an area in the room and a set of materials as indicated. Do not let groups open their resource envelopes until the game begins. Do not point out to the groups that they are receiving different sets of materials.

- Give the banker a copy of the shape diagrams, a pen and the extra play money. Tell the banker that they are responsible for:
    - Checking the groups' shapes for quality (accuracy) and paying them the appropriate amount
    - Rejecting any shapes that are not of an acceptable size or quality
    - Keeping note of any changes in the shapes' values during the game
- Read out the objectives and rules of the game (See *How to Play: Instructions for Students*, below).
- Review with students, as necessary, the process of making the shapes using the geometry tools available.
- Make sure that everyone can see the shape diagrams and game rules.
- Repeat the rules once more and then announce that 'manufacturing can begin'.
- At the beginning of the game, students may be confused or puzzled, and ask you questions about the resources and tools that they have and do not have. They will likely ask you if they can borrow or trade resources or tools. Do not answer their questions, but simply repeat the rules. After a minute or two of confusion, students should start moving around the room and begin trading. It is important that the initiative comes from them, and not from you.
- Allow the manufacturing and trading to continue for 20-30 minutes, depending on the size and interest of the class.
- Observe what is happening. Things to watch for (and note down for discussion after the game) include:
    - Which groups are able to manufacture and earn money immediately
    - What happens when a group runs out of resources
    - How groups go about accessing the tools or resources they need to make shapes
    - What prices groups sell their extra tools or resources for and at what point in the game
    - Any alliances and deals that develop
- During the game, influence its direction by introducing new trading situations. Examples are provided in the *Create New Trading Situations* resource (see *Attachments* below).

HOW TO PLAY: INSTRUCTIONS FOR STUDENTS

- In your groups, you should try to make as much money as possible using only the tools and resources that you have in your envelope.
- You make money by manufacturing and selling goods. These goods are the shapes shown on the diagram, each of which has its own value.
- Take your shapes in batches of five identical shapes to the banker. The banker will check them for quality and pay you the appropriate price.
- The object is to manufacture as many shapes as possible – the more you make the richer you will be.

AFTER THE GAME: INFORMATION AND GUIDANCE FOR THE FOLLOW-UP DISCUSSION

Background: What is International Trade All About?

International trade: the economic interaction among different nations involving the exchange of goods and services, that is, exports and imports.

A guiding principle of international trade is comparative advantage, which indicates that every country, no matter their level of development, can find something that it can produce cheaper than another country. The theory of comparative advantage says that it is beneficial for both a country and for the world as a whole if

trade is allowed to take place based on comparative advantage because that will result in the most efficient use of resources. A country has a comparative advantage in producing a good relative to another country or the rest of the world, if the cost of producing the good is lower than it is abroad. Countries tend to export goods in which they have a comparative advantage and import goods where they have a comparative disadvantage.

The potential gains from trade are the improvements in social wellbeing and economic wealth made possible by countries being able to trade with one another, as compared with having a closed economy. Gains from trade arise from two primary sources. One source is the difference in factors of endowment: countries have different natural resources, different amounts of labour, and various types and stocks of capital. The other source is the economy of scale that allows countries to mass-produce goods, while their consumers enjoy the benefits of having a wide variety of product types available.

It is highly unlikely that a single country (or economy) will have all of the raw materials that are necessary to sustain life and create development. Countries that operate an open economy have the means to access, through trade, the resources that they do not have within their geographical boundaries. Closed economies do not. A country operating a closed economy must also be able to produce enough food for all of its citizens and is, therefore, highly dependent on agricultural and other farming methods. If the country suffers any adverse conditions, such as too much rain or not enough rain, this will have a direct impact on the economy and people may face chronic shortages of food. Countries that operate a closed economy tend to be less developed than those who trade freely because they have so many limitations.

Nevertheless, the gains from trade may not be shared equally even if the most efficient means of production are used.

Issues and Topics for Discussion

During the early stages of the discussion, help students to see that the game they just played isn't simply a game, but rather a demonstration or representation of international trade in the real world.

If international trade is beneficial, is it always fair?

Some countries have more resources – be those raw products, human capital or tools and technology – than others. The game replicates this by giving some groups more resources than others. The students will likely become aware of this very quickly and you may well hear complaints of "It's not fair".

You can use the feelings of "unfairness" as a starting point to the discussion. Ask groups how they felt about having a different number and range of resources and tools. Have them support their feelings with examples of incidents from the game.

What is fair?

During the game, did the groups with fewer resources and tools find a way to strengthen their positions? If you noticed that groups formed alliances, arrangements or cartels, ask students to comment on their reasons for doing so and whether they achieved their goals.

Did all of the groups make some gains from trade? Ask the students to reflect on whether "the gains from trade" are always shared equally. What do they think might be done in the real world to achieve both an efficient use of resources and a fair outcome?

Support the students' reflection on the difficulties of arriving at a just system of exchange between those with the raw materials and those with the economic power to buy, process and market them. If students feel that the current system of international trade is unfair, what system or arrangements would they put in its place?

What could the world be like?

If the world is an unfair place, and if we acknowledge that its structures need changing, what sort of attitude should we have towards the world's resources and the use we make of them? What values other than economic efficiency might need to be considered in determining the international trade rules?

World views

The concepts of gains from trade, justice, environmental stewardship and money are central to the perspectives of many peoples and cultures. Appreciating these concepts will give a fuller understanding of how the world's present trading relationship may affect different groups of people.

Have the students share their perspectives. Include a discussion of First Nations' perspectives as well as those of other cultural groups.

ASSESSMENT

Have students write up their experience of the game and what they learned from participating in it and from the follow up discussion. The write up should include:

- Highlights from their experience of the game
- Strategies used during the game and how well they worked
- What they learned during the discussion
- Self-evaluation of their participation in the game and discussion

EXTENSIONS

Play the Trading Game developed by Wap Sigatgyet Aboriginal Education Services (317 Ninth Avenue West, Prince Rupert, Tel: 250-627-1536). Facilitate a discussion with students about the similarities and differences between contemporary global trade and traditional Ts'msyen trade.

ATTACHMENTS (on following page)

- *Create New Trading Situations*
- Shape diagrams and rules

CREATE NEW TRADING SITUATIONS

You can change or influence the dynamics of the game – and the experience of it for the different groups – by introducing one or more of the new situations described below. All of the actions have parallels in the real world and will enrich and deepen the students' understanding of the nature of global trade.

Different actions will have a different impact on each group. Some will benefit; others will be presented with a challenge. If necessary, you can impose the new situations strategically to help ensure that all groups stay actively engaged in the game.

Action: Change Market Values

Change the value of some of the shapes. (For example, if you drop the value of circles from $500 to $200 the rich groups will find that their compasses are no longer as useful as they were.) Tell the banker of any changes.

Parallels in the real world:

Countries and companies often find that the demand for their products changes as a result of changing economic conditions, currency fluctuations, population growth, changes in technology, improved transportation infrastructure and transport services, and reductions in trade barriers. Prices fall when there is over-supply of a particular commodity.

The global coal and lumber markets, for example, are exposed to price fluctuations because of changing demand:

- The International Energy Agency reports that coal won the energy race in the first decade of the 21st century, having met almost half of the increase in global energy demand. China's emergence as a net coal importer in 2009 led to rising prices and new investments in exporting countries. The BP Energy Outlook 2030 predicts that China's rapid growth in coal consumption will end after 2020. However, China will still account for 67% of global coal growth through to 2030. It will remain the largest coal consumer, increasing its share of global consumption from 48% to 53%. India will account for 33% of global coal growth, and its share of global coal consumption is predicted to climb from today's 8% to 14% by 2030. Since both China and India face challenges with their domestic coal supply, their growing import requirements will drive further expansion and integration of the global coal trade in the Pacific Rim.
- The global forest sector is in the throes of structural changes that are transforming the industry. The BC industry is among the most affected by these changes due to its dependence on global markets as the major demand driver. In 2010 the UN Economic Commission for Europe identified four major factors that are reshaping the global forest industry:
    - The downturn in demand due to the global financial crisis
    - Globalization of the forest industry
    - Climate change policies
    - Increasing activity related to international control of the origins of wood to ensure sustainable and legal production

Action: Supply Extra Raw Materials

Have a secret supply of paper, give some to one of the groups and announce to the class that a new raw-resource supply has been discovered in this group. (If this is done late in the game, when everyone is running short of paper, it will quickly change relationships between the groups.)

You could also give one group some pieces of coloured paper. This could represent the discovery of a new low-grade or high-grade resource and the shapes from this paper could be valued lower or higher, accordingly.

Parallels in the real world:

When there is a discovery of new oil, development of a Liquefied Natural Gas industry, or an expansion of existing mineral or coals deposits, these could and should be used to support social and economic development and to create wealth. However, resource development has environmental and other impacts that could lead to conflict. Despite the vast revenues generated by such finds, poor people may not see any benefit. In Canada, the metallurgical and thermal coal – used in steel production and in the production of electricity – has become one of the country's most sought-after resources and one of the causes of conflict for those individuals concerned about the possible environmental impacts of air emissions.

Action: Use the Stickers

The B Groups have a sheet of stickers. They have not been told what purpose or significance the stickers have in the game. Give the stickers a value by secretly telling the richer A Groups that if they can get hold of and attach one sticker to each of their shapes, the shapes will be worth four times their original value. Tell the banker.

As the B Groups don't know the value of the stickers, they may sell them at a low price and allow the A Groups to make a huge profit. Or they might come to understand the stickers' value since they are in demand by the A Groups. Another possibility is that the B Groups will hold on to the stickers until the end of the game, in which case the potential of the resource is never realized.

Parallels in the real world:

A contemporary twist on the imbalance of power is the use of patents. Large companies, usually based in rich, industrialised countries, may use their research and technology capacity to patent resources that people in poorer countries have been using for generations. Such patents give the companies the sole right to manufacture and sell that particular resource for up to 20 years.

For example, US-based company RiceTec Inc. patented basmati rice, in what one Indian academic referred to as "a direct appropriation of traditional knowledge of Indian farmers". Such patents are causing Indian farmers and consumers to lose control of their most basic foods to transnational corporations.

Action: Give Access to Trade Credit

Encourage one or two groups by granting them access to trade credit for a short period of time. You could, for example, allow them free access to scissors or one of the geometry tools for 5 minutes.

Parallels in the real world:

Trade credit plays an important role in supporting development and can be used to help companies engage in international trade. The Business Development Bank of Canada (BDC) and Export Development Canada (EDC), both financial Crown corporations, will work closely with private sector lenders to improve access to financing for Canadian businesses.

Companies often need financing to support their international transactions: to pay for the up-front costs associated with the production of a large export order, to expand into new markets, or to respond to a buyer's request for financing. A range of financing options and programs are available, including:

- Export Express Credit – provides unsecured loans to help people grow their export businesses
- Export Guarantee Program – enables business owners to obtain loans from their financial institutions to provide them with the financing they need for export-related activities or foreign investments
- Supplier Financing – provides business owners with access to cash rather than having them wait for payment from their foreign buyers

Action: Introduce Strife and Unrest

The game leader can halt production by declaring a temporary general strike. Remove the scissors from a Grade A group for a few minutes so that production has to stop.

Parallels in the real world:

Civil and industrial disruptions caused by major strikes.

In addition to intervening directly in the game with one of these new situations, you may also choose to influence the course of the game by suggesting or encouraging one of the following arrangements or developments:

Development: Tariffs and Duties

Groups may elect to place restrictions or charges on trading with other groups, just as nations have tariff and quota arrangements that they have developed to protect their own interests.

Parallels in the real world:

Tariff reductions can be a useful way to enhance trade, but they have the potential to affect the interests of existing companies due to an increase in competition.

In other instances, an industrialised country may charge low tariffs on the raw materials they import and higher tariffs on processed products. Often, processing a product does increase its value. Imposing prohibitive tariffs on another country's processed goods restricts that country's supply.

Development: Trade Agreements

Trade agreements may develop during the game in the form of two or more groups agreeing to cooperate for their mutual benefit. Notice the degree of cooperation that takes place.

What type of improved market access do the groups ask for? What is the amount of the tariff reduction? Are the gains from trade evenly shared, or do some groups benefit more than others?

Parallels in the real world:

Almost every country in the world is part of at least one trade agreement. More than 140 countries are members of the World Trade Organization (WTO), but there are also about 100 regional trade agreements.

- Canada's best-known trade agreement is probably the North American Free Trade Agreement.
- Others agreements include ASEAN (Asia), EU (European Union), and Mercosur (South America).

The least-developed countries in the world have not be able to fully advance their trade interests at least in part because the development of trade agreements is a lengthy process that requires significant financial and human resources.

Development: Producer Cartels

The groups with the most paper might decide to join together to protect themselves from being individually exploited by the Group A students. If these groups withhold supplies of paper, they may be able to improve the terms of trade for themselves and conserve stocks for the future.

Parallels in the real world:

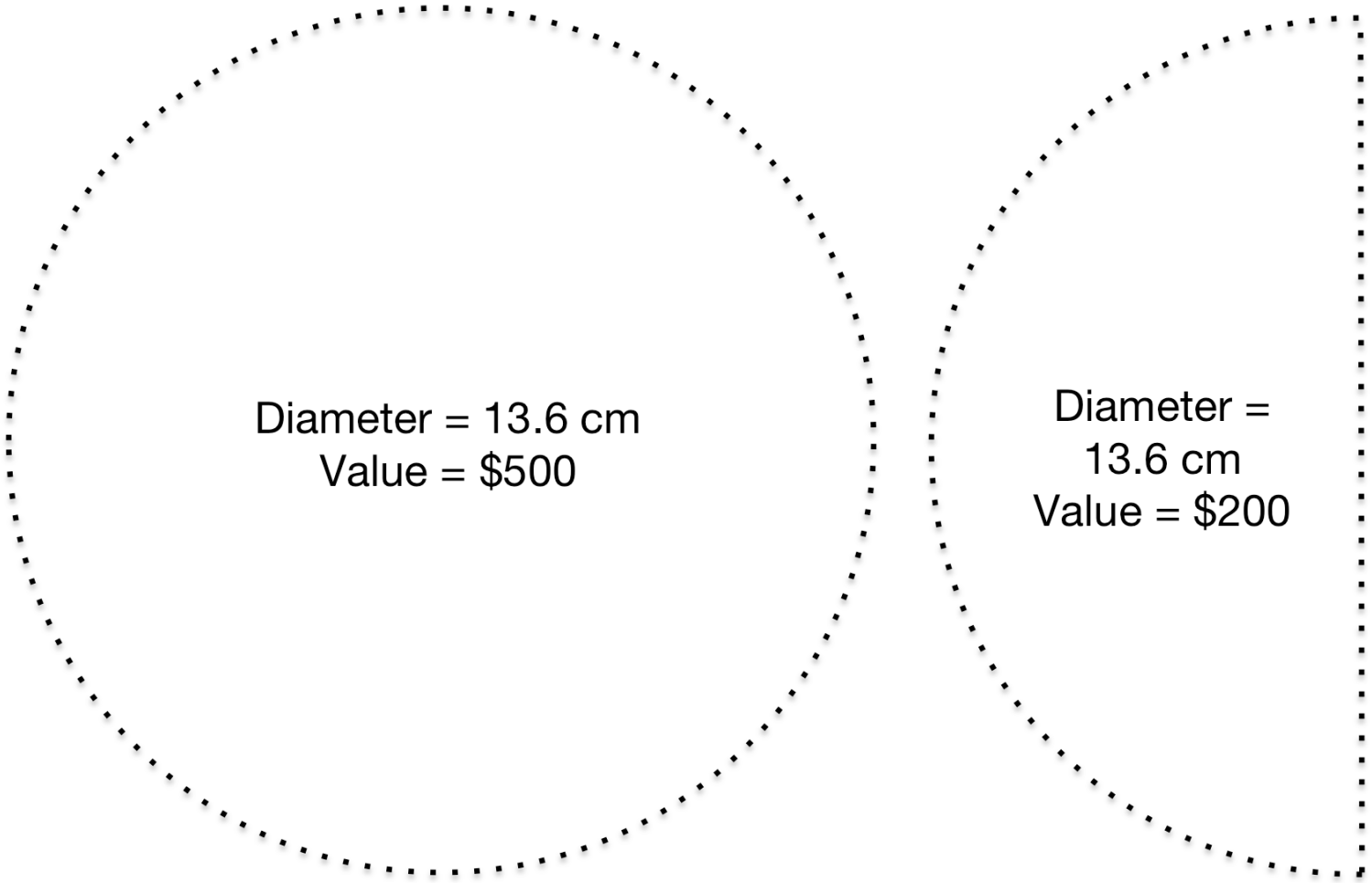
In a cartel, producers agree to set the level of output. When demand is strong output is increased, when demand is weak production is reduced and in this manner the cartel is influencing the price of the commodity.

The most well known agreement of this kind was when oil-exporting countries banded together to form the Organisation of Petroleum Exporting Countries (OPEC).

Export cartels and shipping conferences are examples of cartels entered into by countries. In many countries, depression cartels have been permitted in industries that are judged to require price and production stability and/or deemed to be requiring price and production stability and/or to permit streamlining of industry structure and capacity. In Japan for example, such arrangements have been permitted in the steel, aluminum smelting, shipbuilding and various chemical industries.

It is difficult for a group of countries or companies to sustain a cartel. Each member of the cartel would be able to make more profit by breaking the agreement (i.e. by producing a greater quantity or selling at a lower price than agreed) than it could make by keeping it. The incentive to cheat explains why cartels are difficult to sustain in the long run.

The Trading Game: Shape Diagrams



Rules of the Game

1. You may only use the materials provided to make the shapes.
2. Shapes must be of the dimensions specified and must have cleanly cut edges.
3. Take the shapes to the banker in batches of five to receive payment.
4. The teacher will intervene in any disagreements.

The Trading Game: Shape Diagrams