GLOBAL ECONOMICS & INTERNATIONAL TRADE SIMULATION

A 2-Week Interactive Unit for High School Economics

- 10 Detailed Lesson Plans (90 minutes each)
- 8 Country Resource Allocation Cards
- Trade Negotiation Protocol & Tariff Scenario Cards
- Debrief Discussion Guide & News-Journal Activity
- Student Reflection Assessment & Teacher Rubrics
- Aligned to National Economics Standards

UM Printables

TABLE OF CONTENTS

SECTION 1: TEACHER OVERVIEW & SETUP

Simulation Objectives

This 2-week interactive simulation is designed to bring the abstract concepts of global economics to life for high school students. By representing countries with distinct resource endowments, students will experience firsthand the mechanics and tensions of international trade.

- Understand and apply the concept of comparative advantage.
- Experience the gains from trade through voluntary exchange.
- Analyze the effects of tariffs and trade barriers on domestic and global welfare.
- Navigate currency fluctuations and their impact on trade balances.
- Develop negotiation, critical thinking, and collaborative problem-solving skills.

National Standards Alignment

This simulation aligns with the Voluntary National Content Standards in Economics, specifically:

- **Standard 5:** Trade (Voluntary exchange creates value).
- **Standard 6:** Specialization (Specialization leads to greater total output).
- **Standard 13:** Income (Comparative advantage determines trade patterns).
- **Standard 16:** Role of Government (Trade barriers create winners and losers).

Materials & Preparation

- **Country Cards:** Print one set of the 8 Country Resource Allocation Cards per class. Laminate for durability.
- **Currency Tokens:** Each country starts with physical tokens representing their domestic currency (e.g., colored chips or printed play money).
- **Trade Logs:** Students will need paper or a digital spreadsheet to track their production, trades, and tariffs paid.
- **Timer:** A visible countdown timer for negotiation rounds.

> **TEACHER TIP:** For larger classes, divide students into teams of 3-4 per country. Assign roles within the team: Lead Negotiator, Trade Logger, Domestic Production Manager, and Finance Minister. This ensures all students are actively engaged during negotiation rounds.

Grading & Assessment Overview

Assessment for this unit is multi-faceted and focuses on both process and understanding:

- **Simulation Participation & Trade Logs (20%):** Active engagement and accurate tracking of resources.
- **News-Journal Entries (30%):** Daily reflective writing analyzing their country's economic decisions.
- **Debrief Participation (20%):** Contribution to class discussions using economic vocabulary.

• **Final Reflection Assessment (30%):** A comprehensive written assessment applying concepts to real-world scenarios.

SECTION 2: 10 LESSON PLANS

Each lesson is designed for a 90-minute block period but can be easily adapted for two 45-minute periods. Lessons follow a structured format: Warm-Up, Direct Instruction/Context, Simulation Activity, and Debrief/Closure.

LESSON 1	Introduction to Global Trade & Endowments	Time: 90 mins

Objectives:

- Define resource endowment and scarcity in a global context.
- Identify the resource strengths and weaknesses of an assigned country.
- Establish country teams and understand the simulation rules.

Lesson Progression:

1. Warm-Up (10 mins): Display two images: a desert nation and a tropical island. Ask: 'If you lived here, what would you struggle to produce? What would you have plenty of?' Introduce the concept of **Resource Endowment**.

2. Direct Instruction (15 mins): Define key terms: Resource Endowment, Absolute Advantage, Scarcity. Explain that countries cannot produce everything they want/need, creating the necessity for trade.

3. Simulation Setup (25 mins): Divide class into 8 country teams. Distribute the Country Resource Allocation Cards. Give teams 15 minutes to read their profiles, calculate their raw production limits, and identify their country's critical shortages.

4. Activity - Domestic Production Plan (25 mins): Teams must decide how to allocate their labor force between producing Agricultural Goods (Ag) and Manufactured Goods (Mfg). They record their starting inventory on their Trade Logs.

5. Closure (15 mins): Each country gives a 1-minute 'State of the Union' summary of their endowment and their primary domestic shortage.

Resource Endowment	The quantity and quality of factors of production (land, labor, capital) available to a country.
Absolute Advantage	The ability of a country to produce more of a good than another country using the same amount of resources.

LESSON 2	Comparative Advantage & Production Decisions	Time: 90 mins

Objectives:

- Calculate opportunity cost using production data.
- Determine which country has the comparative advantage in producing a specific good.
- Adjust domestic production to prepare for international trade.

Lesson Progression:

1. Warm-Up (10 mins): Review: Why can't Country Agraria (an agriculture-rich country) produce many manufactured goods? Introduce the idea that trade is the solution, but to trade smartly, we must know our 'best' product.

2. Direct Instruction (20 mins): Teach the **Opportunity Cost** formula for production. Define **Comparative Advantage**. Work through a simple 2-country, 2-good example on the board, showing how to find the lower opportunity cost.

3. Activity - Calculating CA (25 mins): Using their Country Cards, teams calculate the opportunity cost of 1 unit of Ag and 1 unit of Mfg. They then identify their country's Comparative Advantage and write it on their whiteboard/trade log.

4. Activity - Specialization (20 mins): Based on their CA, teams shift their labor allocation to specialize (not completely, but heavily) in the good where they have CA. They update their production inventory.

5. Closure (15 mins): Discuss: 'What happens if everyone specializes in Ag?' Highlight that global markets require a balance of exports and imports.

Opportunity Cost	The value of the next best alternative given up when making a choice. In production, it's the amount of Good Y given up to produce one more unit of Good X.
Comparative Advantage	The ability of a country to produce a good at a lower opportunity cost than another country. This is the basis for mutually beneficial trade.

Calculating Opportunity Cost
`OC of Good X = (Max Production of Good Y) / (Max Production of Good X)`
Example: If max Ag = 100 and max Mfg = 20. *OC of 1 Mfg = 100/20 = 5 Ag.* *OC of 1 Ag = 20/100 = 0.2 Mfg.*

TEACHER TIP: Students often struggle with the OC formula. Remind them: 'To find the cost of X, divide the Y total by the X total.' Have them write their OC directly on their Country Cards in pen so they don't have to recalculate it during negotiations.

STUDENT HANDOUTS

Print the following handouts for each student team. They are essential for tracking data, calculating production, and executing trades accurately during the simulation.

PRODUCTION PLANNING SHEET

Complete this sheet BEFORE each trade round. Decide how to allocate your 100 workers to maximize your comparative advantage.

Country: _____ Round: _____

Resource	Max Output (from Card)	Workers Assigned	Calculation	Actual Production
Agriculture (Ag)	(Max Ag)	(0-100)	(Workers/100) x Max Ag	
Manufacturing (Mfg)	(Max Mfg)	(0-100)	(Workers/100) x Max Mfg	
TOTAL WORKERS:		**100**		

Example Calculation

If your Max Ag is 1000 and you assign 80 workers to Ag:
Actual Ag Production = (80 / 100) x 1000 = **800 Ag**.
This leaves 20 workers for Mfg. If your Max Mfg is 200:
Actual Mfg Production = (20 / 100) x 200 = **40 Mfg**.

TRADE LOG

Record EVERY transaction here. Both the buying and selling country must log the trade and sign to verify. Update your inventory after each deal.

Country: _____ Round: _____

Deal #	Partner Country	Goods Exported	Goods Imported	Tariffs Paid	Partner Signature
1					
2					
3					

CURRENCY CONVERSION SHEET

Use this sheet during Lesson 7 & 8 when exchange rates are in effect. All currencies are pegged to the Global Reserve Unit (GRU) for easy calculation.

Country	Currency Name	Symbol	Value of 1 GRU
Agraria	Dollar	Ag$	2.00
Industria	Euro	In€	3.00
Balancia	Pound	Bc£	4.00
Horticultia	Franc	Ht■	3.50
Mechanica	Rupee	Mc■	5.00
Islandia	Krona	Is■	6.00
Techton	Yen	Tc¥	200.00
Fertilia	Peso	Fr■	2.50

CONVERSION FORMULA

To find out how much a foreign good costs in your own currency, use this formula:

Price in Your Currency = Price in Foreign Currency x (Your GRU Rate / Their GRU Rate)

EXAMPLE CALCULATION

You are **Agraria** (GRU Rate = 2.00). You want to buy a tractor from **Industria** (GRU Rate = 3.00). The tractor costs **30 In€**.

Step 1: Identify rates: Yours = 2.00, Theirs = 3.00.
Step 2: Divide Yours by Theirs: 2.00 / 3.00 = 0.67.
Step 3: Multiply the price by this number: 30 In€ x 0.67 = **20.1 Ag$**.

Therefore, a 30 In€ tractor will cost you 20.1 Agraria Dollars.

TEACHER TIP: The GRU (Global Reserve Unit) acts like the US Dollar in the real world—a universal baseline. By pegging all currencies to the GRU, students don't need to memorize 56 different exchange rate pairs; they only need to know their own rate and the formula. This makes the math accessible for high schoolers while preserving the real-world impact of currency fluctuations.