

# Technology and the Tantrums of Trade

Created by: Maya Bhagat, Frankford High School

---

## Lesson Plan Background:

- **Demographics**

- **Theme/Topic:** Global Trade Then & Consumption Now
- **Subjects/Grade Level:** High School Science Grades 10-12, Special Education
- **Suggested duration:** 3 - 4 class periods.
- **Introduction to lesson:** This lesson is designed to have students consider the factors that affect and impact global trade. Students will learn about trade on the Silk Route and reflect on the factors that intersect with the need to trade. In this lesson students will consider the Global Goals on Consumption and Production and respond by taking action to support the effort.

- **Connection to Standards/Common Core**

- **Next Generation Science Standards:**
  - HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activity on natural systems
- **Common Core Standards: Reading in Science and Technology:**
  - CC.3.5.11-12.I Synthesize information from a range of sources into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
- **PA State Science Technology Engineering & Environmental Literacy and Sustainability Standards (STEELS)**
  - 3.4.9-12.B Apply research and analytical skills to evaluate the conditions and motivations that lead to conflict, cooperation, and change among individuals, groups, and nations.

- **Essential Questions**

- How are situations of trade on the Silk Route similar, and still pertinent today?
- How can we contribute to supporting the Global Consumption Goals?

- **Learning Objectives**

- Students will be able to analyze the confluence of factors that impact global trade.
- Students will be able to design an action step to support the Global Consumption Goals.

- **Materials Needed**

- Google Slides /or [Printed Student Graphic Organizer Worksheets](#)
- How the Silk Road Made the World - [You Tube Video](#)
- Global Goals Website - <https://www.globalgoals.org/>
- Global Goal 12 Responsible Consumption & Production Website - <https://www.globalgoals.org/goals/12-responsible-consumption-and-production/>

## LESSON PLAN

---

### Lesson Plan Details:

- **Pre-Assessment of Prior Knowledge**

- Students will walk-in and immediately start by identifying and analyzing and web researching the materials and composition of an object used in their daily lives.

- **Teacher-Student Interaction**

1. The teacher will then ask students to pair up or assign pairs and share their research findings of their individual items with their partner. The Teacher will ask students to listen carefully and use their Doodle Space on their sheets to draw or write what they see, think, wonder or feel from their listening and discussions.
2. The Teacher will make students notice how different items or components are made in different places and introduce, The Silk Route and its historical significance. The Teacher will review the Doodle Space Template to bring attention to details the students need to consider while watching the video: How the Silk Road Made the World. [https://www.youtube.com/watch?v=H\\_pFt5s\\_pIM](https://www.youtube.com/watch?v=H_pFt5s_pIM)
3. After the video allow students 5 mins. silent reflection time, to WONDER.
4. Teacher assigns or asks students to sit in pairs or small groups and discuss and respond to the prompts based on the video. Students need to respond with Claim, Evidence, Reasoning (CER)
5. Teacher will show students the 17 Global Goals website that World Leaders agreed to in 2017. <https://www.globalgoals.org/>
6. Teacher will then show students the focus on goal 12 Responsible Consumption and Production <https://www.globalgoals.org/goals/12-responsible-consumption-and-production/> and ask students to review the sections and scroll down to the Things To Do.
7. Students will use the ideas as a starting point to design action steps to reduce consumption.

- **Closing Activity**

- Students will summarize their learning using a 3-2-1 structure with sentence starters.

- **Post-Assessment**

- Teachers will share the variety of perspectives and responses from students, clarify misconceptions, address any lingering questions and invite students to showcase their work to the school community.

### Lesson Plan Resources/Next Steps:

- **Resources**

- United Nations Video - The 17 Sustainable Development Goals <https://sdgs.un.org/goals>
- Harvard University - Project Zero and the pedagogy that promotes making thinking visible website <https://pz.harvard.edu/resources/see-think-wonder>

- **Extension Activities/Cross-Curricular Connections**

- The [Gapminder website link](https://www.gapminder.org/) has misconception quizzes formatted as Multiple Choice questions with immediate feedback. Students can enjoy exploring these questions linked to the 17 Global Goals. <https://www.gapminder.org/>
- Semiconductors have been in the mass media spotlight in recent months, necessary for electronic devices,

## LESSON PLAN

---

and critical for the rapidly evolving technologies such as Artificial Intelligence (AI) and Autonomous Vehicle manufacturing. TSMC is a company in Taiwan that manufactures some of the most sophisticated semiconductors on the planet. With China's increasing interest to acquire Taiwan, other nations are vulnerable to accessing this supply source. Ask students to research the Semiconductor industry, and the resulting and rising geopolitical concerns by nations.

- <https://www.lowyinstitute.org/the-interpreter/semiconductor-industry-where-politics-gets-real-taiwan>
- The Silk Route in today's world has a rail system. The most current infographic obtained from the website Railfreight.com can be accessed by email request from the website, [this is a 2022 link](#). Ask students to look at the most recent data and share what they notice, see, think, wonder, feel and share their perspectives with the class community. <https://events.railfreight.com/wp-content/uploads/2022/07/Infographic-Volumes-on-the-New-Silk-Road.pdf>

- **Reflection**

- These activities are designed to have students thinking about their personal consumption. Looking at history, through the Silk Route, enables students to gain insights that trade is not necessarily an isolated and peaceful transaction, there are numerous forces at work. It invites students to question their own consumption and take individual action to support Global Consumption Goals.

### Resource Support:

This lesson plan was developed by Maya Bhagat, who participated in the [Global Teacher Seminar 2023: Global Movement of Goods and People](#). The seminar was a partnership with the Center for African Studies (CAS), Center for Latin American Studies (CLAS), Center for Slavic, East European and Eurasian Studies (CSEEEES), East Asian Studies Center (EASC), and Middle East Studies Center (MESOC) and funded in part by U.S. Department of Education Title VI National Resource Center grants to The Ohio State University. The content of this lesson plan does not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government. Lesson plans are available online for classroom use worldwide and can be accessed at the [Global Teacher Seminar Resource page](#).

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Technology & the Tantrums of Trade

### Walk-in & Warm-Up

Consider an item that you use on a daily basis.

The item \_\_\_\_\_

List the variety of materials or components that make up the item.

---

---

---

Take one of those items, and research the composition, the materials it is made out of, the world's largest producers and processors of the raw material..

---

---

---

---

### TURN & TALK.

In pairs, take turns and share your research findings with your partner. Listen carefully.

*Doodle Space* SEE, THINK, WONDER, FEEL.

Consider your item, and that of your peer partner. Write / draw your reflections below.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

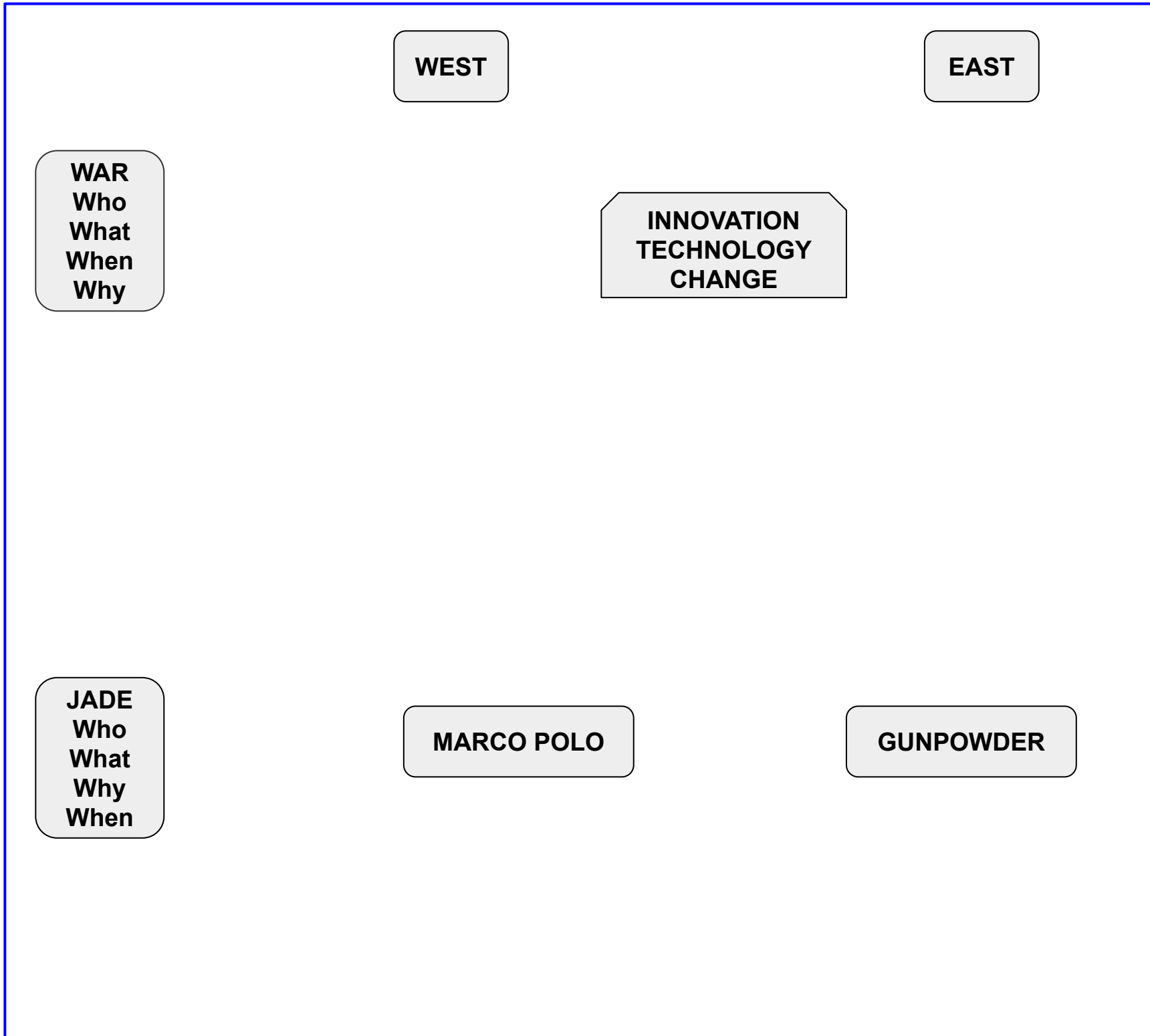
Period: \_\_\_\_\_

## Technology & the Tantrums of Trade

We live in times of global trade. The Silk Route was a was formed due to trading, however there were many aspects of technology and warfare that intersected during those times.

Review the Doodle Space below to mark guiding points as you SEE, THINK, WONDER and FEEL the documentary video [How the Silk Road Made the World](https://www.youtube.com/watch?v=H_pFt5s_pIM) 55min.

[https://www.youtube.com/watch?v=H\\_pFt5s\\_pIM](https://www.youtube.com/watch?v=H_pFt5s_pIM)



Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Technology & the Tantrums of Trade

### Post Video

Reflections. Take 5 min. of silent time., just to WONDER.

Discuss the Silk Route in pairs or small groups and respond to the following prompts. Consider your responses in terms of the issues that arose on Silk Route, and think of how analogous issues *prevail in today's trade environment*. Explain using Claim, Evidence and Reasoning, (CER)

1. Is trade of goods necessary? Why or why not?
2. Is continued improvement of technology necessary, why or why not?
3. Is war necessary? Why or why not?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Technology & the Tantrums of Trade

[In 2017 World Leaders agreed to 17 Global Goals.](https://www.globalgoals.org/) <https://www.globalgoals.org/>

We are going to explore one of these goals.

Goal Number 12 [Responsible Consumption and production.](https://www.globalgoals.org/goals/12-responsible-consumption-and-production/)

<https://www.globalgoals.org/goals/12-responsible-consumption-and-production/>

In pairs or small groups, review the page link, then scroll to the bottom, Things To Do.

Reflect on your thoughts and consider one action you would take.

Below use the Doodle Space to write/draw what you SEE, THINK, WONDER, FEEL.

Design a plan taking at least 3 steps towards taking action.

### WRAP-UP Summary

Based on the discussions use the sentence starters and respond to the following 3-2-1 prompts:

*The first thing I learned*

*The second*

*The third*

**2/ Write 2 understandings or insights gained from the activities in this lesson.**

*One detail of information is*

*because now I understand*

*Another is*

*because now I get that*

**3/ Explain one thing that makes you wonder - based on this topic.**

*I wonder*