

Barges, Trains and Trucks

Lesson 1: Infrastructure Literacy Round Robin

Students read a position paper from ASA and recent articles on infrastructure and its importance to agriculture, and share with classmates. Teacher instructions, student pages and articles are included.

Sequence

Lesson 1 of the unit: *Barges, Trains, and Trucks*

Time

50 minutes

Grade Level

9-12

Materials

Infrastructure Literacy student document. -*included*

Infrastructure Literacy articles (9)

<https://ocj.com/2021/11/transportation-issues-are-affecting-harvest-completion/>

<https://ocj.com/2021/11/infrastructure-jobs-investment-act-becomes-law/>

<https://ocj.com/2021/10/labor-infrastructure-and-supply-chains/>

<https://www.dtnpf.com/agriculture/web/ag/news/business-inputs/article/2021/04/19/rfa-makes-case-including-biofuels>

<https://ocj.com/2019/03/road-and-bridge-infrastructure-could-get-a-boost-with-increased-ohio-gas-tax/>

<https://ocj.com/2021/01/big-issues-facing-farming/>

<https://ocj.com/2019/08/usda-touts-locks-dams-roi/>

<https://ocj.com/2012/08/locks-and-dams-key-to-the-future-of-ohio-ag/>

<https://ocj.com/2014/10/railcar-shortage-means-higher-demand-for-trucks/>

Objectives

Students will read and analyze nine articles about agriculture infrastructure.

Students will share and discuss important points from nine articles about agriculture infrastructure.

Students will reflect on the needs and effects of infrastructure on the agricultural sector.

Vocabulary

Infrastructure, Agriculture, Production, Yield, Waterway

Prior Knowledge

Students should have a basic understanding that food is grown in some parts of the world and not others, and that countries barter and trade food resources in a global economy.

5E Plan

Engage

To begin this lesson, begin a discussion among your class about what they like to eat and where they think it comes from. Be sure to ask probing questions, such as “What devices or strategies do you think were used to bring the food to your plate?”

Allow about five minutes for classroom discussion, being sure to hear from a multitude of students.

Explore

Infrastructure Round Robin

Pass out the Infrastructure Round Robin student notes document and one of the nine articles to each student. Each student should receive one of nine articles, which they will read and record notes about to become an ‘expert.’

Allow 7-10 minutes for students to read their article and record notes.

Barges, Trains and Trucks

Explain

After students have read their articles have them share their notes with peers next to them.

Allow 7 minutes for rotation 1 – discuss article with 2 other students.

Allow 7 minutes for rotation 2 – discuss article with 2 other students you haven't discussed with yet.

Allow 7 minutes for rotation 3 – discuss article with 2 other students you haven't discussed with yet.

Allow 7 minutes for rotation 4 – discuss article with 2 other students you haven't discussed with yet.

After the class has finished their rotations, wrap up the discussions with a classroom discussion that points out interesting connections between all articles.

Extend

As a class read through the article, Transportation Position Paper. Have your students answer the final two questions on their notes document, being sure to include a reflection that includes evidence.

Evaluate

Ask for volunteers to share their answers to the final questions on the student notes document. Check for understanding of interesting connections or common themes among the articles.

Additional Resources

Waterways Council, Inc – provides great state resources and infographics about the impact of waterways on the economy. (<http://waterwayscouncil.org/waterwayssystem/>)

US Army Corps of Engineers – Pictures of Locks and Dams

(<http://www.lrp.usace.army.mil/Missions/Navigation/LocksandDams.aspx>)

US Army Corps of Engineers – Geospatial data that can be used in the discussion.

(<http://geoplatform.usace.army.mil/home/>)

Panama Canal Authority Official Site – (<http://www.pancanal.com/eng/>)

Suez Canal Authority Official Site – (<http://suezcanal.gov.eg/>)

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