

CERCA SET **Railway Infrastructure**
English Language Arts

What factors should the U.S. government take into account when making decisions about investing in rail infrastructure?

LESSON TITLE **Why Can't America Have High-speed Trains?**

CERCA QUESTION Will the United States ever have high-speed rail networks like those in Asia and Western Europe?

RESOURCES

- **Build Background Knowledge**
<https://www.pinterest.com/thinkcerca/railway-infrastructure-cerca-set-board/>
- **CERCA Framework**
- **Vocabulary Routine**
- **Speaking and Listening Routines**

Whole group	Online
Small group	Offline
Individual activity	Activity time period
Speaking and listening activity	Audio
Available in English and Spanish	

Introduce the CERCA Question



Explain what high-speed rail networks are using a video or visuals. Make sure students know that such rail networks are often paid for by the government but could also be created by independent companies. If students need support on the geography in this lesson, show a map and point out Asia and Western Europe

1 Connect



Have students log in to ThinkCERCA and click into this lesson.

Introduce Vocabulary



Use **Semantic Webbing** to introduce vocabulary.

NOTE: Some students will need support for additional words not listed on the student support page. Weave them into the instruction.

LEVEL 3-4 Expanding

► **ASK:** What is a high-speed rail network?

Support language acquisition with the following sentence frame:

High-speed rail networks are _____.

LEVEL 3-4 Expanding

Read the overview aloud and discuss vocabulary. Then read the writing prompt aloud for students before they answer.

Complete Step 1: Connect.

LEVEL 3-4 Expanding

Assign vocabulary words to small groups, or to partners. For small groups, assign a word and have them map it out on the whiteboard. Depending on student familiarity with the vocabulary words you can create webs for all new words, or just the most challenging words. When they are finished they can take a minute to explain it while classmates copy the map down. For partner work, have mixed ability pairs create maps for all assigned words in their notebooks.

After the routine have students add the focus words to their word notebooks.

LEVEL 4-5 Bridging

Read the overview aloud and review the key academic vocabulary. Next, read the writing prompt aloud and have students record their responses.

LEVEL 4-5 Bridging

Complete Step 1: Connect.

LEVEL 4-5 Bridging

Have students work in pairs to write their own definition of the word in English. Next, have them brainstorm an image or mental picture to illustrate each word.

After the routine have students add the focus words to their word notebooks.


Introduce the Summary

En | Sp




Remind students that this is a summary for the passage they will read. Point out the Vocabulary as you read.

LEVEL 3-4 Expanding

 Have students read the Spanish version on the student support page, if applicable, before you read the summary aloud and have students follow along.

LEVEL 4-5 Bridging


 Ask a student to read aloud the summary in English to practice their fluency.


2 Read




Have students read the text, using Vocabulary from the student support page as appropriate.

LEVEL 3-4 Expanding


 Read comprehension questions with students before they begin reading the passage.

 Complete Step 2: Read.

 Discuss comprehension questions. Point out key vocabulary words in the text, especially as they are relevant to finding answers.

LEVEL 4-5 Bridging

 Complete Step 2: Read.


 Discuss comprehension questions. Point out key vocabulary words in the text, especially as they are relevant to finding answers.


3 Engage with the Text




NOTE: If you have concerns that your students are struggling with comprehension, you may wish to work with them on Step 4: Summarize before Step 3: Engage with the Text.

LEVEL 3-4 Expanding

 Model highlighting the text for students.


 Complete Step 3: Engage with the Text.


 Use the following sentence frames to discuss the highlights students made.

_____ **is a significant barrier to growth of high-speed rail in the United States.**

_____ **is a factor that supports the possibility of building high-speed rail in the United States.**

LEVEL 4-5 Bridging

 Complete Step 3: Engage with the Text.

 Discuss the highlighting students did. Ask students to share their highlights and notes, and use the following sentence stems to support student engagement in the conversation.

One significant barrier to growth of high-speed rail in the United States is _____.

A factor that supports the possibility of developing a nationwide high-speed rail system is _____.

4 Summarize



Prepare students to write a CERCA by having them summarize the text.

LEVEL 3-4 Expanding

Complete a summary of the article together using either the suggested sentence frames below or the stems in the product. Encourage students to use Vocabulary from the lesson.

Use the following sentence frames to create a summary.

This article provides a clear explanation regarding why the United States has not developed a _____.

Compared to nations in _____ and _____, the United States has a much different rail system.

Developing high-speed rail in the United States doesn't have to be done nationally because _____.

Complete Step 4: Summarize.

LEVEL 4-5 Bridging

Complete Step 4: Summarize.

Review the summaries to ensure that all students understand the big ideas of the passage. Encourage students to use Vocabulary from the lesson.

5 Build Your Argument



Practice creating a CERCA together using the CERCA graphic organizer (online or offline) and the leveled frames below and on the student support pages. Remind students that some of their evidence can come from their highlighting work.

NOTE: You may wish to have students orally respond to the CERCA question using a Listening and Speaking Routine instead of writing a response.

LEVEL 3-4 Expanding

Use the following sentence frames to complete the CERCA graphic organizer.

Claim *The United States [is likely/is unlikely] to build high-speed rail networks like those in Asia and Western Europe.*

Reason *because _____.*

Evidence *There are certain regions, such as the economically important _____, where thousands of commuters use trains daily.*

Reasoning *This is important because _____.*

Counterargument *Some people argue that high-speed rail systems _____ . In reality, such systems _____.*

Complete Step 5: Build Your Argument.

LEVEL 4-5 Bridging

Have students share their thoughts with the group.

Use the following sentence frames to complete the CERCA graphic organizer.

Claim *The United States [is likely/is unlikely] high-speed rail networks like those in Asia and Western Europe.*

Reason *because _____.*

Evidence *Countries like France and Japan are able to support high-speed rail because major transportation hubs--think Paris and Tokyo--also have _____ that make reaching one's final destination convenient.*

Reasoning *This indicates that the United States might also need to _____.*

Counterargument *Some people argue that high-speed rail systems _____ . In reality, such systems _____.*

Evidence *There are certain regions, such as the economically important _____, where thousands of commuters use trains daily.*

Reasoning *This is important because _____.*

Have students complete the graphic organizer with at least one more piece of evidence and associated reasoning. Assist as needed.

Complete Step 5: Build Your Argument.

6 Create Your CERCA



Have students write their CERCA in the lesson online so that you can provide feedback and monitor growth.

► **NOTE:** Remind students that they can use the Copy all button to move their work into the text box.

LEVEL 3-4 Expanding

Use the responses students made in the graphic organizer to model writing in response to the CERCA question.

Have students reread their draft. Then have them submit to complete Step 6: Write Your CERCA.

LEVEL 4-5 Bridging

Have students write their CERCA. Provide support as necessary. Remind students that they can use vocabulary words as they write.

Use this sentence frame to help students conclude their CERCA:
When considering the all of the factors impacting the United States's decisions around high-speed rail, it seems [likely/unlikely] that it will begin developing a system like those in Asia and Western Europe.

Have students add a conclusion and then reread their draft. Then have them submit to complete Step 6: Write Your CERCA.

Complete Speaking and Listening Activities



Complete a whole group speaking and listening activity with all students who completed the grade level lesson. Prompt students to use the vocabulary from the passage in the activity.

LEVEL 3-4 Expanding

Do the **Think-Pair-Share** activity.

LEVEL 4-5 Bridging

Do the **Think-Pair-Share** activity.

Modify this activity by having students start with simple partner talk and then expand to small group discussion (4-6 students).

LESSON

Why Can't America Have High-speed Trains?

CERCA QUESTION

Europe?

Will the United States ever have high-speed rail networks like those in Asia and Western

Vocabulary

*bullet train (noun): a high-speed rail train, often traveling in excess of 200 miles per hour.

cap-and-trade market (noun): regulations to control air pollution by limiting the amount each company is allowed to emit and rewarding those that produce less

congestion (noun): blockage

corridor (noun): a long area of land used for travel between destinations

debuted (verb): introduced

derailed (verb): diverted from being on course

*developed (adj.): having a lot of industries and business activity

devolved (verb): transferred from a higher level to a lower level

emissions (noun): gases released into the atmosphere

endeavor (noun): attempt

extensive (adj.): large scale

incremental (adj.): done in small steps

Vocabulary continued

*infrastructure (noun): set of systems such as a transportation or public water system

languished (verb): has been neglected

leg (noun): a part of a journey

maglev (noun): a transportation system in which opposing magnetic forces allow the train to glide above the track

outstripping (verb): leaving behind

piecemeal (adj.): bit by bit; not all at once

prospect (noun): a future possibility

stimulus money (noun): government funding to help the economy grow after an economic collapse

tantalizing (adj.): the promise of something great but probably not obtainable

track record (noun): something achieved and used as an indicator of future performance

trust fund (noun): money meant for a specific purpose that is legally managed by another organization

*vast(adj.): wide ranging, spread out

within the Goldilocks zone (idiom): just right; perfectly suitable

LESSON

Why Can't America Have High-speed Trains?

CERCA QUESTION

Will the United States ever have high-speed rail networks like those in Asia and Western Europe?

Summary

Considering the vast geography of our country, the complex economic factors involved, and political polarization regarding infrastructure, the prospect of developing a strong high-speed rail system in the United States seems unlikely. States like California and New York argue that bullet trains would be a huge boon for commuters and all Americans. In Europe and Asia the layout of cities makes it convenient to walk to one's final destination from the train station, and if it isn't they typically have metros. In United States you have to rent a car or take a cab because of sprawl making train travel inconvenient. While it could be done piecemeal in locations with well-developed public transport, debates about the issue seem to be focused on an all or nothing model, which helped derail talk of a bullet train between Chicago and Madison. Although high-speed rails would be expensive, with careful planning and a long-term approach, the United States could develop a system of its own.

Have U.S. Light Rail Systems Been Worth the Investment?

Will the United States ever have high-speed rail networks like those in Asia and Western Europe?

¿Tendrá Estados Unidos redes de tren de alta velocidad como las que existen en Asia y Europa Occidental?

Vocabulary

English

*bullet train

(noun): a high-speed rail train, often traveling in excess of 200 miles per hour.

cap-and-trade market

(noun): regulations to control air pollution by limiting the amount each company is allowed to emit and rewarding those that produce less

congestion

(noun): blockage

corridor

(noun): a long area of land used for travel between destinations

debuted

(verb): introduced

derailed

(verb): diverted from being on course

*developed

(adj.): having a lot of industries and business activity

Español

*tren bala

(sustantivo): un tren de alta velocidad, el cual a menudo viaja a más de 200 millas por hora.

mercado de límites máximos y comercio

(sustantivo): regulaciones para el control de la contaminación del aire mediante la limitación de la cantidad que tiene permitido emitir cada empresa y recompensar a aquellos que producen menos

congestión

(sustantivo): bloqueo

corredor

(sustantivo): una larga zona de tierra utilizada para viajar entre destinos

debutar

(verbo): presentar

descarrilar

(verbo): desviar, salir de camino

*desarrollado

(adjetivo): que tiene una gran cantidad de industrias y actividad empresarial

Vocabulary continued

devolved (verb): transferred from a higher level to a lower level	delegar (verbo): transferir el poder de un nivel superior a un nivel inferior
emissions (noun): gases released into the atmosphere	emisiones (sustantivo): gases liberados en la atmósfera
endeavor (noun): attempt	esfuerzo (sustantivo): intento
extensive (adj.): large scale	extenso (adjetivo): a gran escala
incremental (adj.): done in small steps	progresivo (adjetivo): algo que se hace en pequeños pasos
*infrastructure (noun): set of systems such as a transportation or public water system	*infraestructura (sustantivo): conjunto de sistemas, tales como el transporte o el sistema público de agua
languished (verb): has been neglected	languidecer (verbo): descuidar
leg (noun): a part of a journey	tramo (sustantivo): parte de un viaje
maglev (noun): a transportation system in which opposing magnetic forces allow the train to glide above the track	levitación magnética (sustantivo): un sistema de transporte en el que las fuerzas magnéticas opuestas permiten que el tren se deslice por encima de la pista
outstripping (verb): leaving behind	superar (verbo): dejar atrás
piecemeal (adj.): bit by bit; not all at once	poco a poco (adjetivo): paso a paso; no todo a la vez

Vocabulary continued

prospect (noun): a future possibility	prospecto (sustantivo): una posibilidad futura
stimulus money (noun): government funding to help the economy grow after an economic collapse	dinero para el estímulo (sustantivo): financiamiento del gobierno para ayudar a la economía a crecer después de un colapso económico
tantalizing (adj.): the promise of something great but probably not obtainable	tentador (adjetivo): la promesa de algo grande, pero probablemente no obtenible
track record (noun): something achieved and used as an indicator of future performance	registro (sustantivo): algo logrado y que se utiliza como un indicador del rendimiento futuro
trust fund (noun): money meant for a specific purpose that is legally managed by another organization	fondo fiduciario (sustantivo): el dinero destinado para un fin específico que se administra legalmente por otra organización
*vast (adj.): wide ranging, spread out	*vasto (adjetivo): de gran alcance, que se extiende ampliamente
within the Goldilocks zone (idiom): just right; perfectly suitable	dentro de la zona de Goldilocks (expresión): simplemente exacto; perfectamente adecuado

Have U.S. Light Rail Systems Been Worth the Investment?

Will the United States ever have high-speed rail networks like those in Asia and Western Europe?

¿Tendrá Estados Unidos redes de tren de alta velocidad como las que existen en Asia y Europa Occidental?

Summary

English

Considering the **vast** geography of our country, the complex economic factors involved, and political polarization regarding **infrastructure**, the **prospect** of developing a strong high-speed rail system in the United States seems unlikely. States like California and New York argue that **bullet trains** would be a huge boon for commuters and all Americans. In Europe and Asia the layout of cities makes it convenient to walk to one's final destination from the train station, and if it isn't they typically have metros. In United States you have to rent a car or take a cab because of sprawl making train travel inconvenient. While it could be done **piecemeal** in locations with well-**developed** public transport, debates about the issue seem to be focused on an all or nothing model, which helped **derail** talk of a bullet train between Chicago and Madison. Although high-speed rails would be expensive, with careful planning and a long term approach, the United State could develop a system of its own.

Español

Considerando la **vasta** geografía de nuestro país, los complejos factores económicos involucrados y la polarización política con respecto a la **infraestructura**, el **prospecto** de desarrollar un sistema ferroviario de alta velocidad en Estados Unidos parece poco probable. Estados como California y Nueva York sostienen que los **trenes bala** serían un gran beneficio para los viajeros cotidianos y todos los estadounidenses. En Europa y Asia, el trazado de las ciudades hace que sea conveniente caminar hasta el punto final de destino desde la estación de tren, y si no es así, por lo general tienen el metro. En Estados Unidos tienes que alquilar un automóvil o tomar un taxi debido a lo largo e incómodo que es viajar en tren. Si bien se podría hacer **poco a poco** en lugares con transporte público bien **desarrollado**, los debates sobre el tema parecen estar centrados en un modelo de todo o nada, que ayudó a **descarrilar** las conversaciones de un tren bala entre Chicago y Madison. A pesar de que los trenes de alta velocidad serían costosos, con una planificación cuidadosa y un enfoque a largo plazo, Estado Unidos podría desarrollar un sistema propio.

Why Can't America Have High-speed Trains?

Will the United States ever have high-speed rail networks like those in Asia and Western

4 Summarize

This article provides a clear explanation regarding why the United

States has not developed a _____.

Compared to nations in _____ and _____, the United States has a much different rail system.

Developing high-speed rail in the United States doesn't have to be done nationally because _____.

5 Build Your Argument

Claim *The United States [is likely/is unlikely] to build high-speed rail networks like those in Asia and Western Europe.*

Reason *because _____.*

Evidence *There are certain regions, such as the economically important _____, where thousands of commuters use trains daily.*

Reasoning *This is important because _____.*

Counterargument *Some people argue that high-speed rail systems _____.*

In reality, such systems _____.

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Evidence *Countries like France and Japan are able to support high-speed rail because major transportation hubs--think Paris and Tokyo--also have _____ that make reaching one's final destination convenient.*

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In reality, such systems _____.

Evidence *There are certain regions, such as the economically important _____, where thousands of commuters use trains daily.*

Reasoning *This is important because _____.*

6 Create Your CERCA

When considering the all of the factors impacting the United States's decisions around high-speed rail, it seems [likely/unlikely] that it will begin developing a system like those in Asia and Western Europe.