

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

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

CERCA QUESTION

Should cities consider building light rail systems?

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 light rail systems are, supported by visuals if necessary. Make sure students understand that these systems are built, maintained, and paid for by cities or other local areas.

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 light rail system?

Support language acquisition with the following sentence frame:

Light rail systems are _____.

Ask students to discuss any experience with or knowledge of light rail systems they have, especially if there is such a system in your area.

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

Have students brainstorm benefits and challenges of some other, more familiar topic, such as extending the school day or raising the driving age.

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 evidence that supports the case for investing in light rail.**

_____ **is evidence that supports the idea that light rails do not measure up to expectations.**

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 piece of evidence that suggest light rails are worth the investment is _____.


Critics who argue that light rails have not lived up to expectations note that _____.

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 focuses on the successes and limitations of _____.
San Jose, California was the only city to invest in light rail that saw _____.

Although many cities that built light rails in the 1980s didn't increase the number of workers commuting by transit, the author points out that light rail is still _____ 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 *Cities [should/should not] consider building light rail systems because*

Reason *because _____.*

Evidence *Most of the cities that invested in light rails during the 1980s _____,*

Reasoning *which indicates that _____.*

Counterargument *Some people argue that light rail systems _____.* **However, cities that have 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 *Cities [should/should not] consider building light rail systems because*

Reason *because _____.*

Evidence *Most of the cities that invested in light rails during the 1980s _____,*


Reasoning *which indicates that _____.*

Counterargument *Some people argue that light rail systems _____.* **However, cities that have such systems _____.**

Evidence *Despite the fact that light rails do not always meet expectations, the author points out that investing in them is _____.*

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:
After considering all of the benefits and challenges described in the article, it is clear that cities [should/should not] invest in light rail systems because _____.

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).

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

Should cities consider building light rail systems?

Vocabulary

advocates (noun): people who support a cause

appealing (adj.): attractive

cease (verb): stop

*commuters (noun): people who travel regularly to and from the place they work

compensate (verb): make up for; balance out

demographic (noun): groups of people with a particular set of qualities

early-adopter (noun): people or organizations who begin using a new technology very soon after it becomes available

endorsed (verb): supported

essential (adj.): necessary and important

fanfare (noun): loud display of music or show to bring attention to something

implementation (noun): the act of putting a plan into action

*infrastructure (noun): the physical framework or structure of something complex such as a transportation or public water system

Vocabulary continued

initial (adj.): first

*invested (verb): provided money

*light rail systems (noun): a form of urban mass transportation that uses tracks and bus-like cars

median (noun): the middle number in a series of values

mediocre (adj.): not very good

metric (noun): a standard by which something is measured

metros (noun): large cities; short for metropolitan areas

mode (noun): the form something takes

parallel (verb): go along in the same direction

referenda (noun): public votes on issues

reinvigorate (verb): give new energy to something

relatively (adv.): in comparison with something else

share (noun): portion

Vocabulary continued

sprawl (verb): spread out

sufficiently (adv.): enough

transit (noun): transportation

unambiguously (adv.): clearly

virtually (adv.): almost

vitality (noun): liveliness and health

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

Should cities consider building light rail systems?

Summary

In the 1980s, five major U.S. cities--Buffalo, Portland, San Diego, San Jose, and Sacramento--built light rail systems with various levels of success. In some cases more commuters began riding public transportation, but those figures varied over time. While light rails are appealing because of their cost--it is far less than traditional metro lines--they are not guaranteed to reduce stress on other infrastructure. When considering the metrics used to broadly evaluate the success of light rails it is easy to say they have not met expectations. Even with this knowledge, more cities have planned to investment in this type of transportation with the hopes of reinvigorating their communities. For light rails to thrive in the future it will be essential to have both public investment, and government partnerships with private businesses in order to address the cheap cost of driving and parking that keep commuters in their personal vehicles.

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

Should cities consider building light rail systems?

¿Las ciudades deberían considerar construir sistemas de tren ligero?

Vocabulary

English

advocates

(noun): people who support a cause

appealing

(adj.): attractive

cease

(verb): stop

*commuters

(noun): people who travel regularly to and from the place they work

compensate

(verb): make up for; balance out

demographic

(noun): groups of people with a particular set of qualities

early-adopter

(noun): people or organizations who begin using a new technology very soon after it becomes available

endorsed

(verb): supported

Español

defensores

(sustantivo): personas que apoyan una causa

atractivo

(adjetivo): llamativo

cesar

(verbo): dejar de hacer algo

*viajeros cotidianos

(sustantivo): personas que viajan regularmente hacia y desde el lugar en el que trabajan

compensar

(verbo): enmendar; contrarrestar

sectores demográficos

(sustantivo): grupos de personas con un determinado conjunto de cualidades

pioneros

(sustantivo): personas u organizaciones que empiezan a usar una nueva tecnología poco después de que se encuentra disponible

avaluar

(verbo): apoyar

Vocabulary continued

essential (adj.): necessary and important	esencial (adjetivo): necesario e importante
fanfare (noun): loud display of music or show to bring attention to something	fanfarria (sustantivo): muestra en voz alta de música o un espectáculo para llamar la atención sobre algo
implementation (noun): the act of putting a plan into action	implementación (sustantivo): el acto de poner un plan en acción
*infrastructure (noun): the physical framework or structure of something complex such as a transportation or public water system	*infraestructura (sustantivo): el marco físico o la estructura de algo tan complejo como un sistema de transporte o de agua potable
initial (adj.): first	inicial (adjetivo): el primero
*invested (verb): provided money	*invertir (verbo): proporcionar dinero
*light rail systems (noun): a form of urban mass transportation that uses tracks and bus-like cars	*sistemas de tren ligero (sustantivo): una forma de transporte urbano masivo que utiliza pistas y automóviles similares al autobús
median (noun): the middle number in a series of values	mediana (sustantivo): el número medio de una serie de valores
mediocre (adj.): not very good	mediocre (adjetivo): que no es muy bueno
metric (noun): a standard by which something is measured	métrico (sustantivo): una norma por la cual se mide algo
metros (noun): large cities; short for metropolitan areas	metro (sustantivo): grandes ciudades; abreviatura para metrópolis

Vocabulary continued

mode (noun): the form something takes	modo (sustantivo): la forma de algo
parallel (verb): go along in the same direction	paralelo (verbo): ir a lo largo en la misma dirección
referenda (noun): public votes on issues	referendos (sustantivo): votaciones públicas sobre determinados asuntos
reinvigorate (verb): give new energy to something	revitalizar (verbo): dar nueva energía a algo
relatively (adv.): in comparison with something else	relativamente (adverbio): en comparación con otra cosa
share (noun): portion	parte (sustantivo): una porción
sprawl (verb): spread out	extender (verbo): desplegar
sufficiently (adv.): enough	suficientemente (adverbio): bastante
transit (noun): transportation	tránsito (sustantivo): transporte
unambiguously (adv.): clearly	sin ambigüedades (adverbio): claramente
virtually (adv.): almost	prácticamente (adverbio): casi completamente
vitality (noun): liveliness and health	vitalidad (sustantivo): vivacidad y salud

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

Should cities consider building light rail systems?

¿Las ciudades deberían considerar construir sistemas de tren ligero?

Summary

English In the 1980s, five major U.S. cities--Buffalo, Portland, San Diego, San Jose, and Sacramento--built **light rail systems** with various levels of success. In some cases more **commuters** began riding public transportation, but those figures varied over time. While light rails are **appealing** because of their cost, it is far less than traditional **metro** lines, they are not guaranteed to reduce stress on other **infrastructure**. When considering the **metrics** used to broadly evaluate the success of light rails it is easy to say they have not met expectations. Even with this knowledge, more cities have planned to investment in this type of transportation with the hopes of **reinvigorating** their communities. For light rails to thrive in the future it will be essential to have both public investment, and government partnerships with private businesses in order to address the cheap cost of driving and parking that keep commuters in their personal vehicles.

Español En la década de 1980, las cinco principales ciudades de Estados Unidos - Búfalo, Portland, San Diego, San José y Sacramento - construyeron **sistemas de tren ligero** con diversos niveles de éxito. En algunos casos más **viajeros cotidianos** comenzaron a usar el transporte público, pero estas cifras variaron con el tiempo. Mientras que los trenes ligeros son **atractivos** debido a su costo, son muy inferiores a las líneas de **metro** tradicionales, no garantizan reducir el estrés en otras **infraestructuras**. Al considerar las **métricas** utilizadas ampliamente para evaluar el éxito de los trenes ligeros, es fácil decir que no han cumplido con las expectativas. Incluso con este conocimiento, más ciudades han planeado invertir en este tipo de transporte, con la esperanza de **revitalizar** sus comunidades. Para que los trenes ligeros prosperen en el futuro será esencial tener tanto la inversión pública, como las asociaciones del gobierno con las empresas privadas con el fin de abordar el bajo costo de la conducción y el estacionamiento que hace que los viajeros mantengan sus vehículos personales.

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

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4 Summarize

This article focuses on the successes and limitations of

_____.

San Jose, California was the only city to invest in light rail that saw

_____.

Although many cities that built light rails in the 1980s didn't increase the number of workers commuting by transit, the author points out that light rail is still _____ because _____.

5 Build Your Argument

Claim *Cities [should/should not] consider building light rail systems because*

Reason *because* _____.

Evidence *Most of the cities that invested in light rails during the 1980s* _____,

Reasoning *which indicates that* _____.

Counterargument *Some people argue that light rail systems* _____.

However, cities that have such systems _____.

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Reasoning *This is important because* _____.

6 Create Your CERCA

After considering all of the benefits and challenges described in the article, it is clear that cities [should/should not] invest in light rail systems because _____.