

Railroad History

Objective: To examine the different forms of transportation, and to write an essay on the impact the railroad industry had on the United States.

Grade Level: 9-12
Subject(s): Social Studies, History, Technology
Prep Time: < 10 minutes
Duration: 50 minutes
Materials Category: Special

National Education Standards	
Science	
Mathematics	
Technology (ISTE)	
Technology (ITEA)	7a, 7b, 7h, 18b, 18c, 18d, 18e
Geography	

Materials:

- Resource materials on trains and railroads

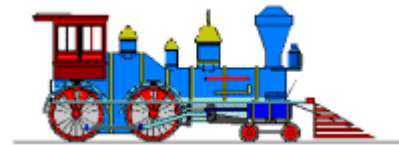
Related Link(s):

California State Railroad Museum
<http://www.csrnf.org/>

Union Pacific
<http://www.up.com/index.shtml>

The History Of Trains
http://members.tripod.com/tony_cllui/

Railroading
http://www.trains.com/story/story_list_homestyle.asp?idMenuCategory=2



Supporting NASAexplores Article(s):

The Slowest (And Fastest) Train In The Universe
http://www.nasaexplores.com/show2_article.php?id=02-046



Railroad History

Teacher Sheet(s)

Pre-lesson Instructions

- Have students gather resource materials.
- Students may use the Internet for information.
- If they use the Internet, be sure to remind them of the school's Internet usage policy.

Guidelines

1. Ask students to state the types of transportation that are used to transport products from place to place within the United States. They'll probably mention airplanes, trains, and trucks.
2. Have them explain how specific products might get from place to place. For example, ask them the following questions:
 - How might artichokes get from central California to Chicago?
 - How might pineapples get from Hawaii to Seattle?
 - How might oranges get from Florida to Texas?
3. Hand out the Student Sheets.
4. Give students 10 minutes to list what they think would be the best and worst things about each method of transportation. For example, an airplane is fast but cannot carry as much weight as a train.

Discussion / Wrap-up

1. Go over the answers to Part B of the Student Sheets.

What two companies were formed to build the Transcontinental Railroad, and how long did they take to build it?

The two companies formed to build the Transcontinental Railroad were the Central Pacific, which started in California and worked east, and the Union Pacific, which started in Omaha, Nebraska, and worked west. They took 6 years to lay the 1,775 miles of track.



Where and when did the transcontinental train lines meet, and what commemorated this event?

When the two transcontinental train lines met at Promontory Point, Utah, on May 10, 1869, a golden spike was driven into the railroad ties to commemorate the event, which joined the Atlantic to the Pacific by railroads.

How did the railroads help the United States establish an effective system for keeping time?

Increased rail travel made it necessary to replace the numerous local time systems with just one, beginning on November 18, 1883. Developed to keep the trains from running into each other, this new system consisted of four time zones.

What is the most common kind of train in the United States today, and how many are in operation?

Diesels are the most common kind of train in the United States today, with over 21,000 in operation.

What is the Transrapid, and how is it propelled?

Developed in Germany, the Transrapid is a train that has a cruising speed of over 300 miles per hour, which it achieves through magnetic levitation.

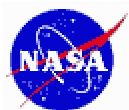
2. Read three to four of the best student essays.
3. With the students' help, make a list on the board on how the railroad system has impacted the United States.
4. Read the 9-12 NASAexplores article, "The Slowest (And Fastest) Train In The Universe." Discuss the use of trains in space.

Extension(s)

- If there are any railroad offices or facilities near you, contact them to see if a speaker is available. Alternately, a serious model train hobbyist or train storeowner might also serve as a speaker who can discuss the history of trains and their development today.
- Search through magazines to find pictures of as many different types of trains as possible, and make them into a collage or bulletin board.
- Listen to some of the famous railroad songs of the past, such as "I've Been Working on the Railroad" or "Casey Jones." What is the message in these songs? Write a song for the fast, high-tech trains of the future.

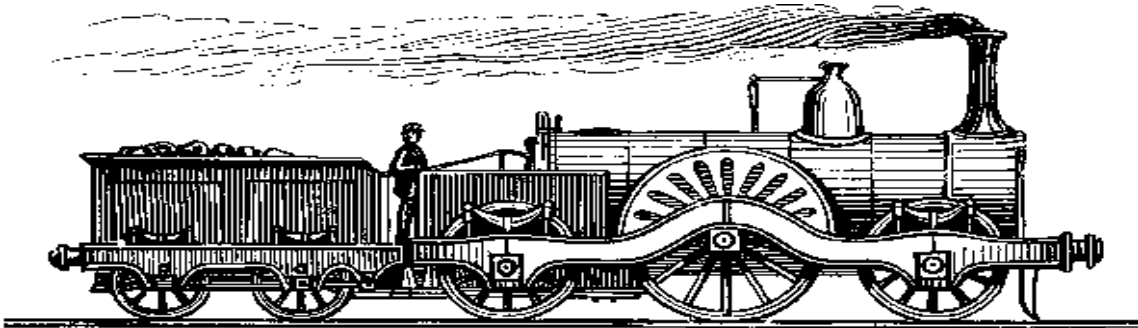


- ❑ Divide the class into small groups or pairs, depending on your class size. Then, assign one type of transportation to each group. Tell students to use reference materials to research their assigned transportation method, and then prepare a fact poster that includes a drawing of the first, or an early model of the machine and a list of fun or interesting facts about it.
- ❑ Create a time line of the various stages of railway completion.



Railroad History

Student Sheet(s)



Part A

Complete the following chart.

Transportation	Advantages	Disadvantages
Taking the bus to school		
Getting a ride to school		
Stage coaches & wagons		
Trains		
Automobiles		
Buses and subways		



Airplanes		
Rocket/ Space Shuttle/ Space Station		

Part B

For more than 100 years, trains were the fastest way to travel from place to place in the United States. Today, if all the world's train tracks were laid out end to end, they'd stretch more than 800,000 miles.



Using a variety of resource materials, answer the following questions:

1. What two companies were formed to build the Transcontinental Railroad, and how long did they take to build it?
2. Where and when did the transcontinental train lines meet, and what commemorated this event?
3. How did the railroads help the United States establish an effective system for keeping time?
4. What is the most common kind of train in the United States today, and how many are in operation?
5. What is the Transrapid, and how is it propelled?

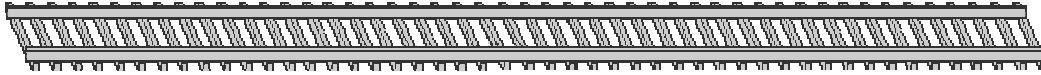
Part C

After reading about trains and the railroad system, write an essay addressing the following questions:

1. How have trains influenced the way we live today?
2. What changes did the train bring to American society?
3. What if the railroads had never existed?



4. What would this have meant to travel, communication, transportation, and the economy?
5. What impact do you think the construction of the railroad had on the environment?



Bonus Question

If all the world's train tracks were laid out end to end, they'd stretch more than 800,000 miles. How many trips to the Moon does that equate to? How many times around the world would those tracks stretch?

Useful Web Sites

California State Railroad Museum

<http://www.csrmf.org/>

Union Pacific

<http://www.up.com/index.shtml>

The History Of Trains

http://members.tripod.com/tony_clui/

Railroading

http://www.trains.com/story/story_list_homestyle.asp?idMenuCategory=2

