

Trekking Across America:

A Look at the Development of Transportation



Grades 5–9

Using AIT Products

- *Tracks: Impressions of America*, program 7, “Westward Ho!”
- *America Past*, program 6, “Roads and Railroads”
- *Technology of Transportation*, program 3, “Cars”
- *Inventing Flight for Schools*, Curriculum Starter Video, “Visions of Flight”

Overview

Transportation played a major role in the development of the United States. At the start of the 19th century, most Americans lived on the Eastern Seaboard and transportation was by foot or horse-drawn carriage. Then the onset of the industrial revolution and Westward Expansion brought a demand for new routes to the West and improved transportation. By the end of the 19th century, advances in transportation provided a safer and much more comfortable way to travel.

In this lesson, students will examine the development of new transportation in the 19th century and evaluate the impact of transportation on society, the economy, communication, and travel. Students will complete an inquiry project about modern modes of transportation.



“Nothing is particularly hard if you divide it into small jobs.”

—Henry Ford

Objectives

- Determine the impact of transportation on society, the economy, communication, and travel.
- Compare transportation of the 19th century to transportation today.

- Explain why the U.S. government developed new transportation routes to the West in the 1860s.
- Describe the role railroads played in the development of the West.
- Describe significant milestones in aviation history.
- Research land, air, or water transportation.

Vocabulary

assembly line
railroad
stage coach
steam engine
telegraph
transportation

Preparation

Materials needed

- Map showing the U.S. population in 1850 (Note: You can generate a map at the [University of Virginia Library Geospatial and Statistical Data Center Web site](#).)
- [Map of Railways in 1850](#)
- AIT video—*Tracks: Impressions of America*, program 7, “Westward Ho!” Cue the tape to approximate time code 8:03.
- Note pads and pens for each student
- [The Pacific Railway Act of 1862](#) (Scroll to Chap. CXX, which is about halfway down the page.)
- AIT video—*America Past*, program #6, “Roads and Railroads.” Cue the tape to the approximate time code 18:35.

- AIT video—*Technology of Transportation*, program #3, “Cars.” Cue the tape to the approximate time code 0:49.
- One poster board for each group
- Copies of Resources (See Appendix A, Appendix B, and Appendix C.)

Planning Notes

Arrange students in work groups to complete this lesson. Groups of three to five are best. During the Inquiry Project, you may want to provide student groups with access to a video-cassette player and a computer with Internet access.

Time

This project will take three to five class periods, in addition to homework time.

Procedure—Day 1

Introduce Topic

Divide the class into groups of three or four. Ask students to imagine that they need to travel from New York to San Francisco. Have them conduct research, determine what mode of transportation they would use, and calculate how long the journey would take. Allow each group to share their travel plans with the class.

Have students think about which types of transportation were available 150 years ago. Ask each group to create a list of transportation available. Students need not research the modes of transportation; they can just share their own knowledge. Allow five minutes to complete this activity. Consolidate the lists on the board. The list may include: covered wagon, stage coach, horse, ship, steamboat, or hot air balloon.

Examine the list of transportation available 150 years ago. Did any of the groups choose these modes of transportation to travel from New York

to San Francisco? Discuss why or why not. Ask students to explain why they think methods of transportation have changed over the years.

Previewing Activity

Explain to students that by 1848 the United States stretched from the Atlantic Ocean to the Pacific Ocean. Tell students that when gold was discovered in California many people began migrating to the West. In 1849, more than 80,000 people made the journey to California. Most people traveled by wagon and traveled no more than 20 miles a day.

Project a map that shows the U.S. population in 1850. Ask students where most of the population lived. Compare the population on the East Coast to the population in the West. Ask students why they think very few people settled in the plains and what role they think transportation played in people's decision to move west.

Video

Prepare students for watching the AIT video from *Tracks: Impressions of America* by asking each group to select one person to be the recorder. Explain to students that they will watch a video that describes early transportation in the United States.

Cue program 7 from the series *Tracks: Impressions of America* to approximate time code 8:03. Pause the video at approximate time code 9:14. Ask students to discuss the post card questions. Have each recorder write down the group's answers. Each group should then submit their answers to you.

Discuss each group's answers. Students should understand that trains brought manufactured goods to the West. People from the West also sent goods to the East. They sent items such as agricultural products and furs.

Homework

Tell students to imagine that it is 1850 and they want to travel across the Appalachian Mountains. Ask students to select one of the following modes of transportation: stage coach, canal boat, or train. Then have students create a travel brochure that describes what it is like to travel on this mode of transportation.

Procedure—Day 2

Reflection

Invite students to share their brochure with the class. Ask which mode of transportation they prefer and why.

Introduce New Topic

Distribute a map of railways in 1850. Ask students where most of the railroads were located. Explain to students that by this time, there were many railways connecting the North and South. However, the East and West coasts were still not connected.

Tell students that many legislators wanted the government to help build a railroad that would connect the East Coast with the West. Have students speculate why the government wanted to encourage this.

Distribute a copy of the Pacific Railway Act of 1862. Have students read the document and work in groups to answer the following questions.

- When was this act approved?
- What is the purpose of this act?
- According to this act, what was the Union Pacific Railroad Company allowed to do?
- Why do you think the government provided for the building of telegraph poles along the railroad?

- Whom did this act affect?
- What impact do you think this act had on the economy?

Have one person from each group share the group's answers. Discuss student answers.

Video

Cue program 6 from the series *America Past* to approximate time code 18:35. Tell students to take notes during the video and list the reasons why people wanted to build a railroad across the United States. Play the video until approximate time code 21:26.

Post-Video Discussion

After the video, discuss the following questions with students.

- What difficulties did passengers of the early railroad face?
- Why were new routes to the West an economic necessity?
- The development of the railroad had an effect much greater than just making travel easier. How was each of the following affected by these developments? Westward expansion, land values, the location of population, national unity.

Homework

Tell students to imagine that they are a legislator in 1862. Have students write a speech to Congress either in favor or against building a railroad to the West.

Procedure—Day 3

Introduce New Topic

Ask students which mode of transportation they use most often. Explain to students that today most people in the United States travel by car.

Tell students that the first gasoline powered car was built in 1886. However, few people drove cars until 1908. In 1908 Henry Ford revolutionized manufacturing by using an assembly line to produce cars. Henry Ford successfully mass produced automobiles with the “Model T” engine and made automobiles more accessible to people. Today cars are a way of life.

Video

Cue program 3 from the series *Technology of Transportation* to approximate time code 0:49. Play the video until approximate time code 2:59.

Post-Video Discussion

After the video, discuss the following questions with students.

- What did people use early automobiles for? Did people travel long distances in the automobiles?
- What impact did automobiles have on the nation?

Introduce New Topic

Tell students that in 1903, Wilbur and Orville Wright flew the first power-controlled flight ever. The same principles used to make that plane fly are the ones used to make jets fly today. Planes have impacted our lives tremendously. Planes are used for transportation, fighting forest fires, spraying crops, engaging in wars, carrying cargo, and delivering mail.

Video

Explain to students that they will now watch a video about the history of flight. Tell students to

write down the major milestones in flight history. Then play “Visions of Flight” from *Inventing Flight for Schools*.

Group Work

Give each group a poster board. Then have each group create a timeline of major events in aviation history. Display the timelines in the classroom.

Procedure—Days 4–5

Inquiry Project

Draw a three-column chart on the board. At the top of each column, write one of the following headings: land transportation, air transportation, and water transportation.

Have students name different modes of transportation people currently use. Write each mode of transportation in the appropriate column on the board.

Allow groups to self-select one of the following topics: land transportation, air transportation, or water transportation. Once the groups have selected a topic, have each student look at the modes of transportation listed under that topic and write down everything he or she knows about the topic. Allow five minutes for this activity. Then have students share their list with the group.

Each group should consider what everyone knows about the topic and come up with a question they would like to investigate. You should help students identify and refine their questions into learning opportunities.

After each group has picked a question to investigate, distribute the list of suggested resources. These lists are not comprehensive; they are merely a starting point. Students should conduct further research at the local library and on the Internet.

Each group should create a presentation and share their findings with the class. For example, students can create a multimedia presentation, make a scrapbook, develop a timeline, or perform a skit about their topics.

Assessment

Use the following prompts to assess student learning.

Evaluate students’ participation during group discussions to assess the development of critical thinking skills during discussion, group projects, research, and writing.

Have students evaluate the contributions of other students in their inquiry group.

Appendix A: Resources about Land Transportation

AIT Products

American Legacy:

- By Train or Plane

America Past:

- Roads and Railroads

Technology of Transportation:

- Cars
- Inside Combustion Engines
- Land Transportation

Web Resources

United States Department of Transportation's Garret A. Morgan Technology and Transportation Futures Program: <http://education.dot.gov>

The National Transportation Library: http://ntl.bts.gov/reference_shelf.html

From the Library of Congress:

- Railroad Maps: 1828–1900: <http://memory.loc.gov/ammem/gmdhtml/rrhtml/rrhome.html>
- Around the World in the 1890s: Photographs from the World's Transportation Commission: 1894–1896: <http://memory.loc.gov/ammem/wtc/wtchome.html>
- *American Notes: Travels in America, 1750–1920:* <http://memory.loc.gov/ammem/lhtnhtml/lhtnhome.html>
- Everyday Mysteries: Who Invented the Automobile? www.loc.gov/rr/scitech/mysteries/auto.html

From the Smithsonian Institution:

- Transportation History: www.si.edu/RESOURCE/FAQ/nmah/transportation.htm
- America on the Move: <http://americanhistory.si.edu/onthemove/index.html>

Appendix B: Resources about Air Transportation

AIT Products

American Legacy:

- By Train or Plane

America Past:

- Canals & Steamboats

Inventing Flight for Schools

It's a Gas

Technology of Transportation:

- Air Transportation
- How Airplanes Work

Web Resources

United States Department of Transportation's Garret A. Morgan Technology and Transportation Futures Program: <http://education.dot.gov>

The National Transportation Library: http://ntl.bts.gov/reference_shelf.html

From the Library of Congress:

- The Dream of Flight: www.loc.gov/exhibits/treasures/wb-home.html
- The Wilbur and Orville Wright Papers:
<http://memory.loc.gov/ammem/wrighthtml/wrighthome.html>

From the Smithsonian Institution:

- Transportation History: www.si.edu/RESOURCE/FAQ/nmah/transportation.htm
- America on the Move: <http://americanhistory.si.edu/onthemove/index.html>
- National Air and Space Museum: www.nasm.si.edu

NASA History Division: <http://history.nasa.gov/kids.html>

Appendix C: Resources about Water Transportation

AIT Products

American Legacy:

- Seaports & Ships

America Past:

- Canals & Steamboats

Technology of Transportation:

- Sea Transportation

Web Resources

United States Department of Transportation's Garret A. Morgan Technology and Transportation Futures Program: <http://education.dot.gov>

From the Smithsonian Institution:

- Transportation History: www.si.edu/RESOURCE/FAQ/nmah/transportation.htm
- America on the Move: <http://americanhistory.si.edu/onthemove/index.html>
- The National Museum of American History: American Maritime Enterprise: <http://americanhistory.si.edu/exhibitions/exhibition.cfm?key=38&exkey=16>

San Diego Maritime Museum's Sea Chest: www.sdmaritime.org/contentpage.asp?ContentID=99

U.S. Army Corps of Engineers: A Brief History: www.hq.usace.army.mil/history/brief.htm