



Assignment Discovery Lesson Plan An Era of Innovation

Subject

Technology

Grade Level

5-9

Duration

Two or three class periods

Objectives

Students will

- research significant transportation milestones during the past century;
- determine the impact of these milestones on society, the economy, communication, travel, and their lives; and
- design and present "decade in transportation" exhibits.

Materials

- Computer with Internet access (optional)
- Books and newspapers
- Art supplies

Procedure

1. In December 1903, Wilbur and Orville Wright traveled from their home in Dayton, Ohio, to the sandy beaches of Kitty Hawk, North Carolina, to test their 1903 flyer. Have students plan their own trip from Dayton to Kitty Hawk. How many miles separate the cities? (760 miles) What transportation options exist? How long should the trip take with each option? (With a connection in Cleveland, the flight from Dayton to Norfolk, takes just under three hours. From Norfolk, the driving distance to Kitty Hawk is about 90 miles.) Students may use MapQuest (www.mapquest.com) or another map-planning Web site to research other routes.
2. Now have students imagine Wilbur and Orville Wright planning their trip in 1903. What transportation options existed then? About how long would the journey take? What challenges might they face? (A letter from Wilbur shows that he spent one full week traveling from Dayton to Kitty Hawk. The journey required two train rides—one of which took 24 hours—one boat ride, and one ferry ride). A copy of his letter is online at www.nps.gov/wrbr/indepth/trav_kitt.htm.

3. Have students consider these questions:
 - How has American transportation changed since 1903?
 - How do transportation options affect the way we live, work, play, and travel?
 - What characteristics define a transportation milestone?
 - What milestones (significant innovations or inventions) have made it possible to reduce an eight-day trip to a four-hour trip?
4. Tell students they will research the major land, sea, air, and space transportation milestones from 1903 to 2003 and present their findings to the class. Divide the class into small groups, and have each group select a different decade from 1903-2003 for which they will identify and research at least 10 significant milestones. These can be inventions or innovations in air, land, sea, or space transportation. Then, have them determine their decade's top three milestones—the three they believe have made the greatest impact.
5. Have students answer the following questions about their top three milestones.
 - What is the milestone?
 - In what year did it occur?
 - What pioneers or innovators were behind it?
 - What made the milestone significant?
 - In what way has it changed society, travel, communication, or the economy?
6. Now have each student group design and present an exhibit to showcase its "decade in transportation." The exhibit should show all 10 transportation milestones, but focus on the top three. Tell students they should be prepared to explain the impact of their decade's milestones to people's lives then and now.

Extensions

- Have the class vote on the top five transportation milestones or select the most significant transportation decade of the century. Have them justify their choices.
- Ask students to predict the transportation milestones that will mark the next 10 years.
- As a class, design a transportation museum to house the groups' exhibits.
- Have students interview older family or community members to learn more about the personal impact transportation milestones have had on their lives.

Evaluation

The following three-point rubric can be used to evaluate the performance of students during this activity.

3 points: Students worked cooperatively to research and select milestones; exhibited above-average research skills; were able to answer all questions and clearly justify their choices; exhibit design was thorough and creative.

2 points: Students worked somewhat cooperatively to research and select milestones; exhibited on-grade-level research skills; students were able to answer most questions and justify their choices; exhibit design was adequate and well thought out.

1 point: Students did not work cooperatively to research and select milestones; exhibited below-average research skills; were able to answer only some questions and somewhat justify their choices; exhibit design was not thorough or creative.

Vocabulary

commercial

Definition: Designed for a large market or to make a profit

Context: In the 1930s, the public viewed air travel as exciting and glamorous. Therefore, commercial aviation grew.

innovation

Definition: The act of introducing something new

Context: When the Ford Motor Company introduced the world's first moving automobile assembly line in 1913, this innovation forever changed American transportation.

milestone

Definition: An important event that marks a particular time period

Context: When astronauts first walked on the moon, it was considered one of the greatest milestones in our nation's history.

showcase

Definition: To display prominently

Context: Many of the greatest innovations in transportation history are showcased at the Henry Ford Museum in Michigan.

transportation

Definition: The act of moving something or someone from one place to another

Context: In the 1920s, train transportation was cheaper and easier than air transportation.

Academic Standards

The National Council for the Social Studies (NCSS) has developed national standards to provide guidelines for teaching social studies. To become a member of the NCSS, or to view the standards online, go to <http://www.socialstudies.org>.

This lesson plan addresses the following standards:

- Time, Continuity, and Change (II)
- People, Places, and Environments (III)
- Production, Distribution, and Consumption (VII)
- Science, Technology, and Society (VIII)

Credit

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