

Transportation Systems

Unit Plan Overview

Overarching Question

How do cultural attitudes affect day-to-day life, both intentionally and unintentionally?

Key Concepts

- Freight
- Inexhaustible natural resources
- Democracy of consumption
- Plank road
- National Road
- Canal
- Steam power
- Transcontinental Railroad
- Trucking
- Air
- Intermodal containers
- Democracy of land ownership
- Population distribution, spatial patterns and density
- Suburbanization
- De-urbanization
- Haste
- Individual freedom
- Public transportation
- Mass transportation
- Urban public transportation
- Personal transportation
- Risk

Key Concepts Continued

- Energy issues
- Environment
- Public goods
- Free-rider problem
- Infrastructure
- Franchise
- Monopoly
- Toll
- Direct government ownership
- Constitutionality of federal funding for internal improvements
- Cumberland Road (National Road)
- Good Roads Movement
- Gasoline tax
- Interstate Highway System
- Amtrak

Lessons and Main Ideas

Lesson 1

Transportation of Goods and Consumption

- As technology made it possible to transport goods more quickly and cheaply, American attitudes about consumption changed, and consumption patterns changed.

Lesson 2

Transportation for People and American Attitudes

- Americans' car culture is the result of long-established American attitudes and years of innovations in transportation.

Lesson 3 Funding Public Goods

- Most transportation systems partially utilize public goods. There are multiple ways of funding public goods, such as roads. Each way has both benefits and trade-offs.

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Unit Plan Overview Continued

	Minimum (no project)	Maximum (with project)
Lesson 1	1 period (no project)	3.5 periods
Lesson 2	1	6
Lesson 3	1	4
Unit Project	1 (homework assignment)	3 (in-class assignment)
Total	4 periods	16.5 periods

Duration

Each Transportation Systems lesson plan may be taught as a stand-alone lesson, or a class can complete the entire unit. Each lesson includes an optional project. Unit projects can be completed as a homework assignment or an in-class assignment.

Digitized Artifacts
from the Collections of **The Henry Ford**:

Lesson 1 Transportation of Goods and Consumption

- Conestoga Wagon, circa 1840 ID# THF17493
- Lithograph, “View of the Junction of the Northern and Western Canals,” 1825 ID# THF68299
- Wood Engraving, “View of the Public Landing at Louisville, Kentucky,” 1850-1855 ID# THF68301
- Steam Locomotive “Sam Hill,” 1858 ID# THF18578

- Railroad Refrigerator Car, 1924, Used by Fruit Growers Express ID# THF68309
- Horse-Drawn Dray, circa 1890 ID# THF69339
- Crane Unloading Cargo from Railroad Cars into a Mack Model AC Dump Truck, 1927 ID# THF68323
- “Highways of the Sky,” Advertisement Promoting Commercial Air Travel on Ford Tri-Motor Airplanes, 1928 ID# THF68349
- Ford 707E C-Series Truck, Made in 1974, Used by Roadway Express ID# THF67948

Lesson 2 Transportation for People, and American Attitudes

- Harbor Freeway in Los Angeles, California, 1956 ID# THF68307
- Detroit Electric Coupe, 1922 (front view ID# THF69240) (side view ID# THF69247) (dashboard view ID# THF69250)
- Riker Electric Automobile, circa 1896 (front view ID# THF69226) (back view ID# THF69229) (dashboard view ID# THF69236)
- Horse-Drawn Streetcar, circa 1890 ID# THF77234

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Unit Plan Overview Continued

Lesson 2 Continued

- Tesla Car at SpaceX Facility, El Segundo, California, 2008 ID# THF55832
- Stanford Ovshinsky's Hydrogen-Powered Hybrid Car, 2009 ID# THF66140
- Stanford Ovshinsky at United Solar Ovonic Facility, Auburn Hills, Michigan, 2009 ID# THF66232
- Advertising Postcard for Pan American Airlines, circa 1970, "The Plane with All the Room in the World" ID# THF68314
- Mack Model CL Buses Loading Passengers at a Downtown Intersection, Toledo, Ohio, 1935 ID# THF68324
- Man Seated in a Buggy, circa 1890 ID# THF68330
- Solar-Powered Car "Phoenix," 1984 ID# THF69279
- Concord Coach Made by Abbot, Downing & Company in 1891 ID# THF70567
- Van Cleve Bicycle, Made by the Wright Brothers, circa 1896 ID# THF70569
- Ford Model T Touring Car, 1914, Given to John Burroughs by Henry Ford ID# THF70573
- Bangor & Aroostook Railroad Passenger Coach Replica ID# THF67889

- Wreckage of a Chrysler Airflow Car at the Accident Scene, 1934 ID# THF72060

Lesson 3 Funding Public Goods

- Sign Noting Toll Rates for the Detroit and Birmingham Plank Road ID# THF69356
- Poster, "Proclamation of the Route of the Lincoln Highway," 1913 ID# THF68308
- "The Old Pike: A History of The National Road and Incidents, Accidents, and Anecdotes Thereon," 1894 ID# THF68331

Materials

- Sign: How do cultural attitudes affect day-to-day life, both intentionally and unintentionally?
- Lesson 1 Slide Show: Transportation of Goods and Consumption: A Crash Course in the History of Freight
- Student Activity Sheet 1: Project – Transportation, Availability of Goods and Consumption
- Answer Key 1: Project: Transportation, Availability of Goods and Consumption
- Student Activity Sheet 2A: American Attitudes Survey
- Answer Key 2A: American Attitudes Survey

- Student Activity Sheet 2B: Project – Transportation of the Future

- Student Activity Sheet 3: Graphic Organizer for Public Discourse and Decision Making
- Rubric 3: Persuasive Essay
- Wooden mixing spoon
- Local phone books
- Box of tissues
- Student Activity Sheet 4: Review/Assessment Questions and Answers
- Answer Key 4: Review/Assessment Questions and Answers
- Computer with access to the Internet, digital projector and screen (preferred) OR printed handouts of digitized artifacts' images and descriptions
- Computers with access to the Internet for student use (optional)

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