

GETTING THERE: TRANSPORTATION LESSONS

Overview 1. **Transportation Today** 2. **Where are we?** 3. **Where have we been?** **more...**

Lesson Title

Where have we been? (Transportation History)

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Lesson Overview

This lesson consists of two separate but related activities intended to enrich student understanding of transportation history and evolution over time. Both activities acknowledge the subjective nature of historical perspective and how to use critical analysis techniques to derive conclusions or an overall perspective. The first activity requires students to investigate primary sources throughout history to determine uses and perceptions of transportation; the second activity requires gathering additional primary-source perspectives through interviewing friends, family, and relatives.

Curriculum Subjects

- Language Arts
- Social Studies

Estimated Duration

8-10 hours (including homework)

Grades

Suitable for grades 5-8

Curriculum Goals

[National Council of Teachers of English](http://www.ncte.org/library/NCTEFiles/Resources/Books/Sample/StandardsDoc.pdf) (<http://www.ncte.org/library/NCTEFiles/Resources/Books/Sample/StandardsDoc.pdf>):

- Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.
- Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

[National Council for the Social Studies](http://www.socialstudies.org/standards/strands) (<http://www.socialstudies.org/standards/strands>):

- Social studies programs should include experiences that provide for the study of culture and cultural diversity.
- Social studies programs should include experiences that provide for the study of the ways human beings view themselves in and

over time.

- Social studies programs should include experiences that provide for the study of people, places, and environments.
- Social studies programs should include experiences that provide for the study of individual development and identity.

Objectives

Students will be able to...

- Create a concept web / mindmap to organize related information
- Conduct a survey and chart results
- Analyze data to determine correlations and relationships
- Critically analyze historical events through multiple perspectives using primary sources

NETS Standards

1. Creativity and Innovation Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- c. use models and simulations to explore complex systems and issues.
- d. identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- c. develop cultural understanding and global awareness by engaging with learners of other cultures.
- d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- a. plan strategies to guide inquiry.
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

- a. identify and define authentic problems and significant questions for investigation.
- b. plan and manage activities to develop a solution or complete a project.
- c. collect and analyze data to identify solutions and/or make informed decisions.
- d. use multiple processes and diverse perspectives to explore alternative solutions.

Prerequisites

Before engaging in this lesson, students must know or be able to...

- [Create a spreadsheet and bar/column charts](http://www.youtube.com/watch?v=_SnskkIZ0No): http://www.youtube.com/watch?v=_SnskkIZ0No
- [Send Email to ePals](http://www.youtube.com/watch?v=7FO01wKxvJs): <http://www.youtube.com/watch?v=7FO01wKxvJs>
- Use Edmodo

Lesson Procedure

Introductory – Preparatory activities:

Be sure that a teacher has created an Edmodo or other group/class submission site and ePals account:

- [How to Set Up Edmodo](http://www.youtube.com/watch?v=9tTU1iUfExk): <http://www.youtube.com/watch?v=9tTU1iUfExk>
- [How to Set Up ePals \(for teacher\)](http://www.youtube.com/watch?v=Gz5xZQYOb8g): <http://www.youtube.com/watch?v=Gz5xZQYOb8g>

Introduce the first step of the second activity to allow students time to complete the task for homework: students must survey/interview 3 people (friends, family, or strangers) of different generations. For the purpose of this exercise, "generations" will be as follows: 18-40

years old; 40-60 years old; 60-80 years old; over 80 years old.

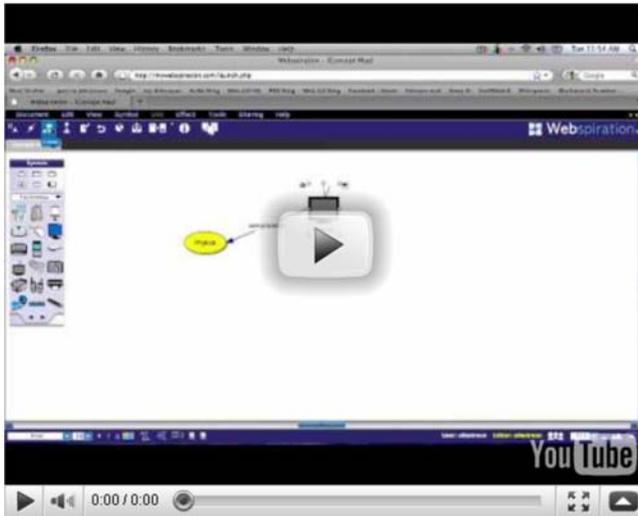
Students will need to determine what they will need to ask in the interview/survey in order to determine whether popular modes of transportation have changed over time. Students should consider all of the different variables that could affect choices of transportation, including: geographic location; community type (rural, urban, suburban); socio-economic status; employment/occupation. Also, have perceptions or uses of transportation changed? Each respondent should give data for when they were a kid (under 18 years old) versus their present-day situation and feelings.

Students should be given until the beginning of the following week to conduct these interviews.

Information presentation and information processing (analysis/synthesis) activities:

Meanwhile, introduce first activity: students will choose or be assigned a mode of transportation to investigate through historical primary sources. Students may access many of these resources through use of [the Primary Sources link](#) on this website.

Students will investigate the primary sources and take notes using [MyWebspiration](#) to organize the following into a concept map: author; tone; date; location; point of view; pros and cons for the transportation mode represented in the primary source.



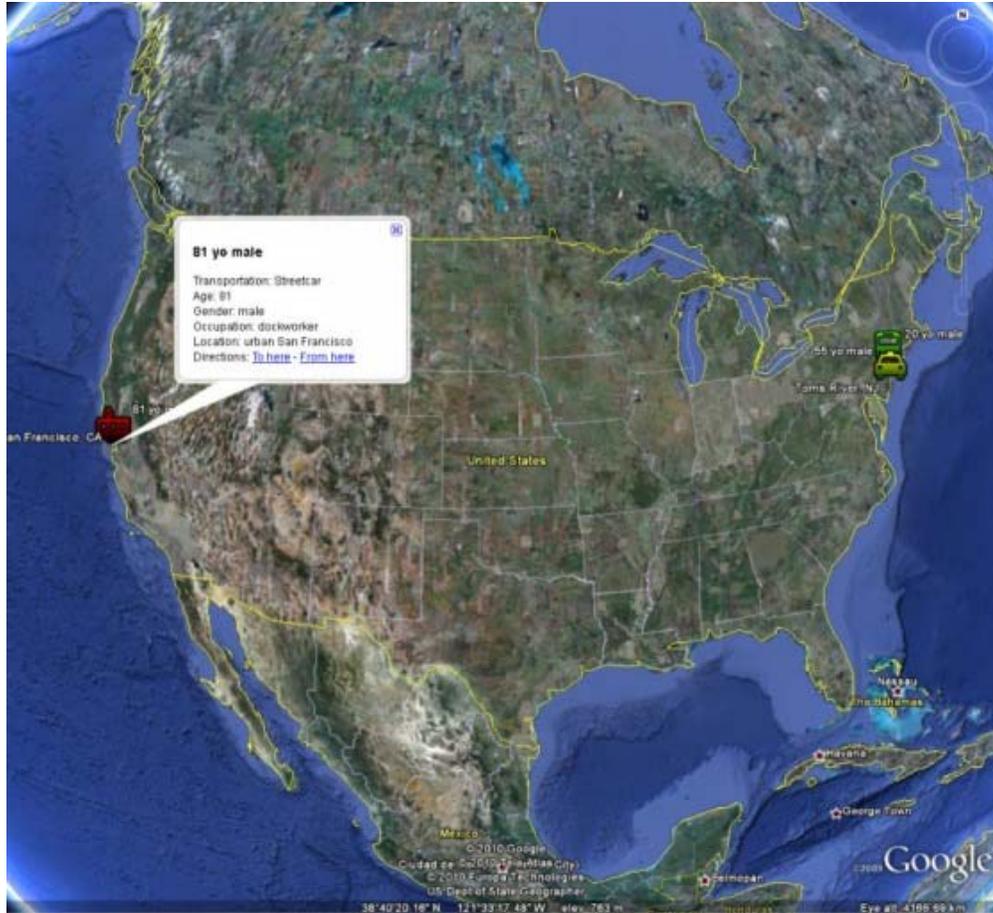
Application activities:

- 1) Based on these multiple perspectives, students will write a persuasive argument for whether the transportation has done more good than harm or more harm than good. Students will do a paired proofreading and revision before submitting finished work to Edmodo.
- 2) Students create and set up spreadsheets to record each of the variables they recorded in their interviews. Two sheets should be made: one to represent transportation choices when young and one to represent current transportation preferences.

Google docs Generational Transportation Perspectives

	A	B	C	D	E	F	G
1	Age	Gender	Most-Used Transportation	Country	City	Community Type	Occupation
2	20	male	bus	USA	New York, NY	urban	student
3	55	male	car	USA	Toms River, NJ	suburban	grocer
4	81	male	streetcar	USA	San Francisco, CA	urban	factory worker
5	48	male	subway	France	Paris	urban	banker
6	72	male	train	France	Nevers	suburban	conductor
7	62	female	bicycle	France	Roanne	rural	teacher
8	71	female	horse and cart	France	Roanne	rural	none (mother)
9							
10							

3) Students mark locations in Google Earth to represent where these respondents lived at the time they used the specified mode of transportation. Students will use color coded symbols to show gender and generation (green = 20-40, yellow = 40-60, blue = 60-80, red = 80+), and will add additional information including occupation, gender, etc. with a note box.



4) Students should next swap and compare data with their international ePals, adding the ePal's gathered info to their spreadsheets and maps.

Closure/review activities:

Students submit their individual spreadsheets and maps via Edmodo. Today, the class will merge their spreadsheets and maps into a

collective whole. The teacher will demonstrate how to create bar graphs comparing age, gender, and most popular modes of transportation from youth. Answer the following questions in the online quiz form:

- Are preferred modes of transportation equally distributed across genders and generations?
- Are they randomly or equally distributed, or does there appear to be trends?
- Do these trends hold the same for all geographic locations?
- Students write a conclusion about whether transportation uses have changed over the past 80 years and, if so, what are the trends? If no trends seem to be present, why not? Are other variables involved other than time/age?

Assessment / Evaluation

- [Survey Data Representation \(Spreadsheet and Google Earth\)](http://rubistar.4teachers.org/index.php?screen=ShowRubric&rubric_id=1905355&): http://rubistar.4teachers.org/index.php?screen=ShowRubric&rubric_id=1905355&

Accommodations / Differentiation

- **Cognitive Difficulties:** Provide text-to-speech software to allow emails and primary source documents to be spoken to the student. The survey/interview homework may prove difficult to keep track of and complete; a portable device (iPhone, iPod Touch, iPad, or netbook) can be carried by the student, preloaded with a survey form/template or app. Ease of use could be further improved by voice-recording the survey answers instead of requiring student to write responses.
- **Physical Difficulties:** Use [mouse alternatives](#) for manipulating Google Earth and Webspiration. Allow creation of Wiki and ePals messages through use of voice recognition software such as [Dragon Naturally Speaking](#). Recording survey/interview answers can be assisted with voice-recording hardware/software instead of requiring student to write responses.
- **Sensory Difficulties:** Google Earth allows zooming which may assist students with vision difficulties and students may work with a partner who can explain the visuals. In addition, text-to-speech may be used the same as for low-performing readers. Hearing impairment will only affect students during video tutorials, and may be mitigated through closed-captioning, transcripts, or written tutorial instructions.
- **At-Risk Students:** The video resources contained in this lesson, the hands-on Google Earth model/simulation, and the ability to interact with peer students should all benefit and empower at-risk students. Contributions to the collaborative spreadsheet can be modified to work in partners with another student to create contributions. The survey/interview homework may prove difficult to keep track of and complete; as per cognitive-challenged students, a mobile device could be carried by the student, preloaded with a survey form/template or app. Ease of use could be further improved by voice-recording the survey answers instead of requiring student to write responses.
- **GATE Students:** Challenge GATE students to find additional primary sources suitable to the lesson and share them with the class using the class Wiki (see lesson 2.)

Materials, Resources, and Equipment

Required hardware/software:

- Computers with Internet connection (at least one for every 2 students)
- [Google Earth](http://earth.google.com): <http://earth.google.com> (free to download and install)

Teacher setup:

- [Edmodo](http://www.edmodo.com/home) site for primary sources and work submissions: <http://www.edmodo.com/home>
- [How to Set Up Edmodo](http://www.youtube.com/watch?v=9tTU1iUfExk): <http://www.youtube.com/watch?v=9tTU1iUfExk>
- [Google Spreadsheets](http://docs.google.com): <http://docs.google.com>
- [How to Set Up ePals \(for teacher\)](http://www.youtube.com/watch?v=Gz5xZQYOb8g): <http://www.youtube.com/watch?v=Gz5xZQYOb8g>

Student resources:

- [Primary Sources](http://gudenius.weebly.com/primary-historical-sources.html): <http://gudenius.weebly.com/primary-historical-sources.html>
- [Introduction to MyWebspiration.com](http://www.youtube.com/watch?v=T0EXLbQC_F8): http://www.youtube.com/watch?v=T0EXLbQC_F8
- [How to Send an ePals Email](http://www.youtube.com/watch?v=7FO01wKxvJs): <http://www.youtube.com/watch?v=7FO01wKxvJs>
- [Google Earth Tutorial](http://www.youtube.com/watch?v=RYapu-TDW30): <http://www.youtube.com/watch?v=RYapu-TDW30>
- [Marking Locations in Google Earth](http://www.youtube.com/watch?v=FB1EseH7jzs): <http://www.youtube.com/watch?v=FB1EseH7jzs>
- [Create a Column Chart in Excel 2007](http://www.youtube.com/watch?v=_SnsklZ0No): http://www.youtube.com/watch?v=_SnsklZ0No

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