



THE HIGHWAY SYSTEM – ITS DEVELOPMENT AND IMPACT ON THE UNITED STATES

TEACHER VERSION

Subject Level:

High School History

Grade Level:

11-12

Approx. Time Required:

45-60 minutes

Learning Objectives:

- Students will be able to interpret a data visualization that shows the population density along Interstate 90.
- Students will be able to explain the purpose of the National Interstate and Defense Highways Act of 1956 and its impact on American society.

Activity Description

Students will examine a data visualization that displays 2010 Census data on population density along Interstate 90. Students will use these data to understand the effect of the National Interstate and Defense Highways Act of 1956 on American society.

Suggested Grade Level:
11-12

Approximate Time Required:
45-60 minutes

Learning Objectives:

- Students will be able to interpret a data visualization that shows the population density along Interstate 90.
 - Students will be able to explain the purpose of the National Interstate and Defense Highways Act of 1956 and its impact on American society.
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Topics:

- American highway system
- The Cold War
- Data visualizations
- Domestic and foreign policies after World War II

Skills Taught:

- Making inferences
 - Identifying issues and problems from a specific historical point of view
 - Interpreting graphs in context
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Materials Required

- The student version of this activity, 2 pages
- Teacher computer with Internet access and a projector to display web sites

A computer with Internet access for each student or small group of students is optional.

Activity Item

This activity uses the following online tool:

- I-90 Population Density Profile, 2010
www.census.gov/dataviz/visualizations/031

For more information to help you introduce your students to the U.S. Census Bureau, read "[Census Bureau 101 for Students](#)." This information sheet can be printed and passed out to your students as well.

Standards Addressed

See charts below. For more information, read

["Overview of Education Standards and Guidelines Addressed in Statistics in Schools Activities."](#)

Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects

Standard	Strand	Cluster
CCSS.ELA-LITERACY.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.	RH 11-12 - History/ Social Studies	Integration of Knowledge and Ideas

UCLA National Standards for History: U.S. History Content Standards

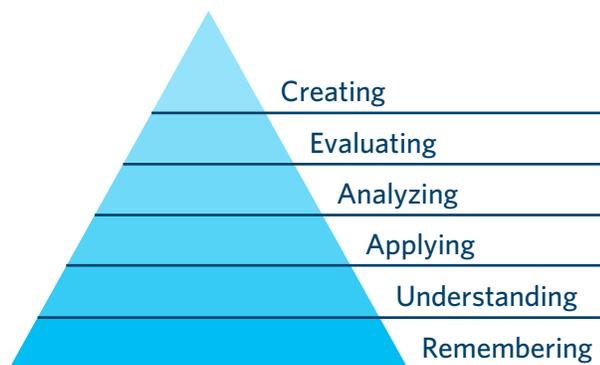
Era	Standard
9 - Postwar United States (1945 to Early 1970s)	Standard 3: Domestic policies after World War II

UCLA National Standards for History: Historical Thinking Standards

Standard	Description
Standard 2: Historical Comprehension	Utilize visual and mathematical data. Students will examine a data visualization that shows 2010 Census data on population density along Interstate 90.
Standard 3: Historical Analysis and Interpretation	Analyze cause-and-effect relationships. Students will use a visualization of 2010 Census data to understand how the National Interstate and Defense Highways Act of 1956 affected American society.
Standard 5: Historical Issues	Evaluate the implementation of a decision. Students will look at an excerpt from a report to the U.S. Congress to understand why the U.S. government decided to pass the National Interstate and Defense Highways Act in 1956.

Bloom's Taxonomy

Students will **analyze** the ways in which the National Interstate and Defense Highways Act of 1956 affected American society.



Teacher Notes

Before the Activity

Students must understand the following key terms:

- **Population density** – the number of people per unit of area
- **Suburb** – a smaller community near a city
- **Suburbanization** – the establishment of suburbs

Students should have a basic understanding of the following concepts:

- Post-World War II effects on U.S. foreign and domestic policies
- The Cold War and its effects on foreign and domestic policies in the 1950s
- The National Interstate and Defense Highways Act of 1956

Teachers should be aware that this activity is designed to be teacher-led, meaning the teacher — who stops to introduce concepts along the way — and the class complete the activity together.

Teachers should review with students how the end of World War II and the start of the Cold War affected Americans during the 1940s and 1950s. Teachers should also ask students how long (in miles and hours) they think it would take to drive from Boston to Seattle without taking any U.S. or state highways. Teachers could reveal that the answer is approximately 3,045 miles (about 45 hours).

Teachers should go here (www.fhwa.dot.gov/publications/publicroads/06mar/07.cfm) to share with students more information on how the highway system was introduced to the U.S. Congress, a process referenced in question 2.

During the Activity

Teachers will display the I-90 Population Density Profile data visualization on the screen and click the play button at left. If students have access to computers, they can follow along.

Teachers will then discuss with students President Dwight D. Eisenhower’s National Interstate and Defense Highways Act. Teachers should use the population density information in the tool to illustrate that this piece of legislation and its implementation connected small towns to big cities and helped promote suburbanization.

After the Activity

Teachers should lead a class discussion or assign an independent writing assignment about the increase of suburbanization in the United States. Students should consider advantages and disadvantages of the American highway system in the 21st century.

Extension Ideas

- Teachers could have students watch and discuss part or all of the video “Road to Prosperity” (youtu.be/cE8I9t8GuEI), produced in the early 1960s by the now-defunct U.S. Bureau of Public Roads. The video was part of a public relations campaign aimed at countering criticisms of the U.S. highway system — including the displacement of homes and businesses and the cost.

Teachers could also use the following tools to extend this activity’s focus to other regions:

- I-10 (South):
www.census.gov/dataviz/visualizations/030
- I-95 (East):
www.census.gov/dataviz/visualizations/012
- I-5 (West):
www.census.gov/dataviz/visualizations/025

Student Activity

Click [here](#) to download a printable version for students.

Activity Item:

This activity uses the following online tool:

- I-90 Population Density Profile, 2010
www.census.gov/dataviz/visualizations/031

Student Learning Objectives:

- I will be able to interpret a data visualization that shows the population density along Interstate 90.
- I will be able to explain the purpose of the National Interstate and Defense Highways Act of 1956 and its impact on American society.

1. Looking at the **I-90 Population Density Profile, 2010**, data visualization, record your own observations and questions about the data.

Student observations will vary but could include that the five biggest cities along this route (Seattle; Chicago; Cleveland; Buffalo, New York; and Boston) appear in bold text. Student questions will vary but could include why studying the highway system is important, as they may not understand how population changes affect government decisions like where to build major infrastructure.

2. The concept of the U.S. highway system was introduced to the U.S. Congress in a 1939 report called "Toll Roads and Free Roads" (www.fhwa.dot.gov/publications/publicroads/06mar/07.cfm). The report recommended constructing a "system of direct interregional highways, with all necessary connections through and around cities, designed to meet the requirements of the national defense in time of war and the needs of a growing peacetime traffic of longer range."

According to the report, what were the two main reasons for building a highway system in the United States?

- **To meet the needs of a growing population that was traveling farther across the United States**
- **To enable the military to travel more efficiently**

3. Using your background knowledge, explain how the United States' foreign relations during the 1940s and '50s may have contributed to the construction of the highway system.

The end of World War II led to the beginning of the Cold War between the Soviet Union and the United States. The U.S. government, and Americans themselves, feared an attack by the Soviets and the advancement of the Communist agenda. This fear, coupled with the recent memory of World War II, contributed to the urgency to build a highway system that would help the U.S. military more easily defend the nation.

4. Imagine you were a business owner in downtown Cleveland in 1956. What concerns might you have had about the highway system's impact on your business? What advantages might you have anticipated from the highway system?

Student answers will vary but could include: If I were that business owner, I would be concerned that I would lose customers to businesses outside of downtown Cleveland since people could travel great distances more easily. However, I could also see more and different customers at my business because people outside of downtown Cleveland could travel to my store more easily.

5. How is population density represented in the data visualization? How can you determine which cities have higher or lower population densities?

Population density in the data visualization is represented as people per square mile on a graph correlated with the map of I-90. Cities with higher population densities are shown as higher values on the graph (spikes) and vice versa.

6. Are there any cities (represented in bold and with filled-in circles) that have obvious suburbs, according to the data visualization? How can you tell? Choose at least one city and explain your reasoning.

Yes. Student explanations will vary depending on the city chosen but could include: Chicago, which is shown on the graph with the largest spike in population density, has smaller population spikes to the east and west that likely represent its suburbs in places like Gary and Elgin.

7. Using what you know about the National Interstate and Defense Highways Act of 1956, explain the impact of the U.S. highway system on American society. For example, how did the transport of people and goods change? How did construction of the highway system change where people lived and worked? Support your answer with specific information from the data visualization.

Student answers will vary but could include: The National Interstate and Defense Highways Act of 1956 mandated the construction of a network of highways throughout the United States, connecting cities from Washington state to Massachusetts. As a result, goods and people could move more quickly and more efficiently across the country. The system also allowed people to keep jobs in the city even if they chose to move out to the suburbs. This process, called suburbanization, resulted in spikes in population density in areas near major cities. In the data visualization, it is clear that Chicago, with a relatively high population density (more than 15,000 people per square mile), was affected by suburbanization because it has nearby areas with smaller spikes in population density (less than 5,000 people per square mile).

8. Why would a government fund the creation of a highway system? Why could the construction of an interstate system be controversial?

Student answers will vary but should summarize the key points from this activity. Students may note that the system could be controversial because it may not be clear whether construction of the interstate should be a public or private expense and whether the system should fall under national or state control.