



Classroom or On-Site Lesson:

## America's Earliest Highway: The Natchez Trace (code EHNT)

➤ **Grade:** 8-12

➤ **Subject Areas:**  
U.S. History, MS  
History

➤ **Setting:**  
Classroom

➤ **Duration:**  
Two 50-minute class  
periods

➤ **Skills:**  
Reading, writing,  
research skills,  
mathematics and  
analysis

➤ **MS Objectives:**  
8<sup>th</sup>: 1b, 1f, 4a, 8c;  
MS Studies: 1a, 1e, 3a,  
3e, 3f, 4a;  
Local Culture: 1a, 1b,  
2b, 3c  
Local Resources  
Studies: 1b, 1c, 2b, 3b,  
4a, 4b;

➤ **National Standards:**  
U.S. History 5-12:  
NSS-USH.5012.3. Era

**Summary:** A historical narrative and four independent lesson activities including mapping, persuasive letter writing, research, and “bridge building” are provided to teach students about the physical evolution of the Natchez Trace.



**Materials Needed:** Playing cards, scotch tape, four coins (one set of these for each student team); two quart cardboard juice/milk container (base only), objects to build weight of base from four to 10 pounds (ex: coins, marbles, sand) (one set for each team).

**Materials Included in this Lesson:** Map of the United States (line drawing) and two Samuel Lewis 1817 maps. Critical Load Student Worksheets.

Graphic Resources available on Natchez Trace lesson plan CD or from <http://memory.loc.gov>

### Instructional Information:

#### Mississippi Objectives:

**8th Grade:** 1) Explain how geography, economics, and politics have influenced the historical development of the United States in the global community. b) Examine the exploration and colonization periods of the United States. f) Identify the causes and effects of the Western movement. 4) Analyze spatial and ecological relationships between, people, places, and environments using social studies tools  
a) Analyze and evaluate the patterns of migration and the consequences of human migration and territorial expansion within the United States b) Trace the exploration and expansion from the Old World to the New World.

#### Secondary 9<sup>th</sup> – 12<sup>th</sup>:

**MS Studies:** 1.Explain how geography, economics, history, and politics have influenced the development of Mississippi. a) Explain how changing conditions can result in a region taking on a new identity e) Analyze the historical and political significance of key events in our state’s development 3) Describe the relationship of people, places, and environment through

time. a) Trace the effects of migration to and from the state. e) Analyze the ways Mississippians have resolved conflict, adapted to change, and continue to address cultural issues unique to our state f) Identify how changes in one environment can produce changes in another. 4) **Demonstrate the ability to apply and interpret social studies tools, a)** Develop maps and graphs to show the spatial relationships within and between regions of the state

**Local Culture:** 1) Explain how geography, economics, and politics have influenced the development of the local region. a) Recognize geographic features of the local area on a map, b) Trace major historical events, which occurred in the local area, 2) Describe the impact of science and technology on the development of the local region. b) Discuss the role of technology in the advancement or lack of progress in the local area. 3) Describe the relationship of people, places, and environments of the local region. b) Identify the various cultural groups, which settled in the local area. 4) Demonstrate the ability to apply and interpret social studies tools, a) Utilize various forms of research to investigate the local culture. b) Interpret information from maps and other social studies tools

**Local Resources Studies:** 1) Explain how geography, economics, and politics have influenced the use of natural resources in Mississippi. b) Analyze the impact of natural resources on the expansion of the Mississippi territory into statehood. c) Trace the development and use of natural resources in the state and local area. **3) Describe the relationship of people, places, and the environment with government. b) Explain how federal and state laws have affected the use of natural resources. 4) Analyze the technological impact of resources. a) Compare/contrast the use of machinery and manual labor. b) Express how technology is used to control the use of natural resources.**

**Learning Objectives:** The students will be able to recognize the Natchez Trace as a road that began in Nashville, Tennessee, and ends in Natchez Mississippi; Identify the how and why the Natchez Trace was improved, and concerns regarding the development of the Natchez Trace to the new nation; Practice the art of civil engineering and test the building of a bridge over a road.

**Teacher Set:** This lesson will teach about the history of the building of the road now known as the Natchez Trace Parkway. Four separate activities are provided. One has students plotting location of the Natchez Trace on a blank map. Two involves students writing a persuasive “mock” letter to President Monroe requesting development of the Natchez Trail. The third activity directs students to learn about engineering. The fourth activity has students actually building a bridge from cards.

**Teacher Overview:** See Historical Narrative for background information.

**Student Task:** The teacher will have the students read the Historic Narrative. The teacher will choose one or more activities for the students to complete.

**Student Instruction:**

Activity #1:

On a blank map of the United States, the students will map the Natchez Trace from its beginning in Nashville, Tennessee, through northwest Alabama, and then terminating at Natchez, Mississippi. On the Samuel Lewis 1817 maps (no trace), the students will map the Natchez Trace from Natchez in the Mississippi Territory to Nashville, TN. The may overlap or trim the maps to make them join. The scale of the two maps may not be exact but will be fairly close.

Activity #2:

Based on the information in this lesson, the student will write a letter to President James Monroe in 1816 regarding why the Natchez Trace should be improved. The student will cite reasons with bullet points. On bullet should address who should pay for the road – the U.S. government, the private American citizen, or the state of Mississippi and give reasons why.

Activity #3: While the Second U.S. Army unit did a great deal of work on the Natchez Trace, civil engineers generally design and build roads in the modern world. Learn more about the job of civil engineering by contacting a local civil engineer to talk with your class. Also, by contacting an archeologist or historian, your class can learn about roads and road-building in early American history!

Activity #4: Bridges or causeways were built along the Natchez Trace to support the weight of travelers over swamps or bodies of water. This activity focuses on issues civil engineers face, including critical load and how to reinforce the design of a structure to hold more weight. Students learn about how to test structures for maximum load by designing prototypes of bridges out of cards. Topics examined include problem solving, teamwork, and the engineering design process. Students work first individually to build a structure, and then combine materials in student teams to design the strongest structure, evaluate the load capacity and critical load, and discuss why the strongest design worked best.

- 1) Learn more about the structures of civil engineers by accessing these web sites:
  - o Try Engineering: [www.tryengineering.org](http://www.tryengineering.org) (accessed June 2010).
  - o Bryan Burg Cardstacker: [www.cardstacker.com/index2.html](http://www.cardstacker.com/index2.html) (accessed June 2010).
  - o Great Structures of the World: <http://greatstructures.info> (accessed June 2010).
- 2) Provide each student team with materials listed at the beginning of the lesson and ask them to devise a structure that will hold the most weight. They are to plan out their structure, and build a prototype for testing. Allow 10 minutes for planning and execution.

- 3) Instructor places weights on each team's prototype increasing the weight until the structure fails. Students chart the maximum load each prototype successfully held (the amount just prior to failure).
- 4) Each student group presents their vision for their design, and explains why they think their design did well or failed. Ask students how would they adjust the design if they could do it again?
- 5) Write an essay or a paragraph describing a recognizable building in your town. Include the history, interesting challenges to the building's engineering, and challenges that the engineers faced in design and construction.

Suggested Resources: <http://memory.loc.gov> to search the Library of Congress for historic photographs and documentation of engineering projects.

## Historical Narrative:

“Historically, there were two, possibly three, Natchez Traces, each one having a different origin and purpose...”

– Dawson Phelps, author of the *Natchez Trace: Indian Trail to Parkway*.

**Trail: A trail is a marked or beaten path, as through woods or wildness; an overland route.**

The **Natchez Trace** has had many names throughout its history: Chickasaw Trace, Choctaw-Chickasaw Trail, Path to the Choctaw Nation, Natchez Road, Nashville Road, and the most well known, the Natchez Trace. No matter what its name, it was developed out of the deep forests of Mississippi, Alabama, and Tennessee, from animal paths and well-worn American Indian footpaths.

With American ownership of the **Mississippi Territory**, an overland route linking the area to the growing country was desperately needed for communication, trade, prosperity and defense from the Spanish and English, who were neighbors on the southwestern frontier. While river travel was desirable, a direct land route to civilization was needed from Natchez in order to bring in military troops to guard the frontier, to take things downriver that were too precious to place on a boat, to return soldiers or boatmen back to the interior of the U.S., and for mail delivery and communication.

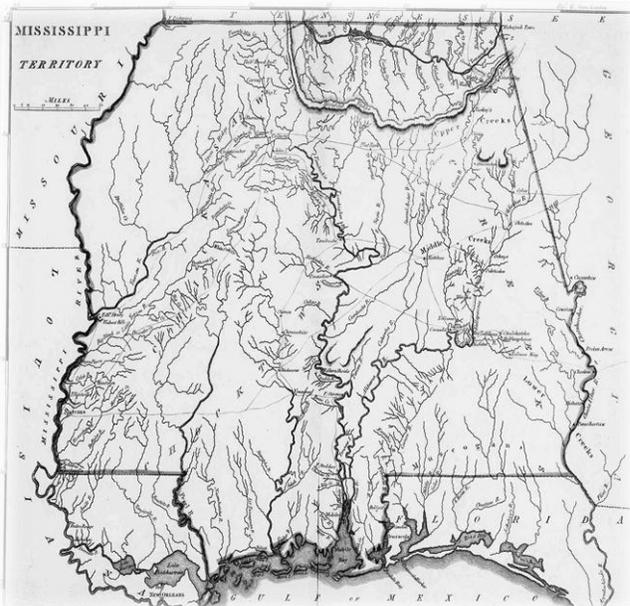


Figure 1: Mississippi Territory  
Mississippi Digital Map Library

The improvement of the Natchez Trace began over the issue of mail delivery. In 1798, **Governor Winthrop Sargent** of the Mississippi Territory asked that “blockhouses” be created along American Indian trails to serve as stops for mail carriers and travelers since it took so long to deliver the mail or travel to Natchez. In fact, a letter from Washington D.C. to Natchez took three months! Sargent’s request yielded a number of “inns” (hotels are the modern-day equivalents) that were created at intervals where food, sleep, and fresh horses were available. In 1800, a regular mail service was established when Abijah Hunt was

contracted to carry mail between Nashville and Natchez for \$2,400 and

the U.S. Congress designated an overland **post road** route between the two towns.

The first mail that went on this route included mostly newspapers, government dispatches, and personal letters. It took two weeks for the mail to be carried between Nashville and Natchez, depending upon road and rider conditions. The U.S. Postmaster knew that the Natchez Trace was terrible and to repair or create a road out of a footpath would be expensive. However, he suggested that U.S. Army troops in

western Tennessee be used to cut wagon roads, bridge creeks, and clear obstacles. **General James Wilkinson** (below right) of the U.S. Army, who was stationed in the area, agreed to plan and put his men to work on it in 1800/1801.

However, before his men could work, they had to obtain land treaties with the Chickasaw and Choctaw tribes since the road would cross through their land. Tribal leaders met with government officials and agreed to the proposed route, established the right-of-way, but said that white settlers could not own inns on their property. The tribes also wanted exclusive rights to manage ferries on the Tennessee River and larger streams. With an agreement in place, the **Second U.S. Infantry** went to work near the **Tennessee River** and with the help of an American Indian guide to show them the way, marked the route that would become the Natchez Trace.



Figure 2: General James Wilkinson  
Library of Congress Image

In the spring of 1802, the first section of the old Trace between the Tennessee and Duck Rivers was cleared. A year later, the same army unit went south to Natchez to start the road north. Thirty men would work for 30 days and then be relieved of duty. Their instructions included removing trees and stumps and then widen the road to eight feet. They also were to grade and smooth the road, as well as clear brush and growth up to four feet on each side of the road.

By 1805, the road extended from Natchez to Grindstone Ford. However, the U.S. Congress was concerned at the slow construction and decided to work on the road in three sections with a civilian bidder to finish the job in 1806. Their instructions were to make the road 12 feet wide and clear it. Streams less than 40 feet were to be bridged, and the entire job was to be finished by October 1807. Unfortunately, it was not quite completed but in 1809 locals in Nashville were already calling it “The Road Opened up by Federal Troops.” That same year, a spur road attaching to the Natchez Trace in the south was opened and called the “Three Chopped Way.” It was heavily traveled, as well.



Figure 3: Old Trace  
NPS Photo

During the War of 1812, Americans again became concerned about the amount of time it took to travel over the Natchez Trace. **Andrew Jackson** used the trace for moving troops during the Battle of New Orleans in 1813/1814 and recommended afterwards that a new military road be constructed between Nashville and New Orleans to cut down travel time. Therefore, in 1816, the U.S. Congress approved \$10,000 to begin work immediately on a new military road. Between 1817 and 1820, a new road was completed by 300 men that cut over 200 miles travel from the older section of the Natchez

Trace. This new road allowed settlers to spread into the southwest at a faster rate than if they used the Natchez Trace.

While improvements to the Natchez Trace were made in the 1810s, there were still concerns. Thousands of travelers were still using the old Trace and many noticed that the northern section was much more usable than the southern portion. The road itself

was widened, smoothed, and made into a much easier passage. In fact, wagons, carriages, horses, and foot travelers could be seen each day on the road in fairly large numbers. However, rains wore down the road and packed the soil. As a result, the old Trace began to sink in places and the trees made canopies over the road. One traveler noted that the trees “shut out the whole light of day for miles.” Heavy rains also made the roads swampy messes that were impassable. The simple solution for travelers was to circumnavigate the bad portion of the road. This created new roads that branched off the original Natchez Trace.

By 1825, post roads had shifted and the Natchez Trace became much less traveled. New transportation methods including the **steamboat** and the **railroad** made overland travel less desirable. However, the old Trace saw quite a bit of use during the **Civil War** when both Union and Confederate troops traveled and fought on it during the **Vicksburg Campaign** of 1863. Afterwards, the Natchez Trace began to be claimed once again by the wilderness. It would not be until the 20<sup>th</sup> century that attention would be given to this important early highway in the form of preservation.

### **Creation of Post Roads:**

**The Post Office Act** was created in 1792 when the U.S. Congress established not only post offices but post roads. The U.S. Congress created the post offices with three fundamental principles in mind:

- 1) The U.S. Post Office would be self-supporting. It would not rely on government subsidies, but would have to generate sufficient income to cover its expenses.
- 2) Second, if the U.S. Post Office generated a surplus, it would invest it in improved service, like roads. In other words, it would not keep its profits.
- 3) Finally, the U.S. Congress and not the postmaster general would decide where to put post roads. However, in England the postmaster general decided where to put post roads and this would not work in America. Therefore, the U.S. Congress decided not to delegate its power, but to keep control of locating post roads.

The debate over post roads had profound political importance. If the U.S. Post Office’s task was to facilitate communications for the government, it made sense to have post roads linking coastal cities. However, U.S. Congress representatives from the interior areas of the country objected to this route. So, in keeping control over the post roads, the U.S. Congress ensured that the U.S. Post Office would respond to the American people rather than serving the government or the business community alone. By 1800, the U.S. Congress had designated 20,000 miles of post roads. The U.S. Post Office was delivering mail as far west as Natchez. By the time of the War of 1812, the United States had 39,378 miles of post roads and more than 2,600 post offices. By 1820, the U.S. Congress had designated 72,492 miles of postal routes linking 45,000 post offices.

### **Building a 19<sup>th</sup> Century Road**

In general, building a road by the early 19<sup>th</sup> century involved simple technology and heavy labor. The first task - to clear the road - was usually the most difficult. Stumps, boulders, brush, and trees had to be cleared. Usually, this was done entirely by hand or with the help of horses. It was not until the construction of the Erie Canal that a worker invented a stump-puller. By using this device, seven men and a team of horses could pull 40 stumps in a day! Considering the density of the forests through which many roads ran, even this was slow progress.

Once debris was cleared, leveling began. This was the distinguishing mark of an improved road, separating it from paths for foot travel or animal migration. Using hand-held rakes, hoes, or sometimes horse-drawn scrapers, farmers and rural laborers, or in the case of the Natchez Trace - the U.S. Army - created a surface amenable to wagon, carriage, horse, and stage travel.

The land also had to be surveyed by a professional to determine the most efficient route between two points. Distance, direction, and elevation all had to be measured. Distance, up through the early 1800s was measured with an iron chain 66 feet long known as **Gunter's Chain** (at right). Eighty chains equaled one mile while 10 square chains equaled an acre. To calculate distance, the Gunter's Chain was simply stretched between two points as many times as necessary. Direction was measured with a magnetic compass. Most elevation measurement was done with a simple level, a flat device containing a glass cylinder of water with a small air bubble that is even used today! Changes in elevation were extremely important in building a road. Cleared, flattened, and graded, a road could be finished at this point. However, builders found that these sorts of roads eroded quickly. Drainage ditches were added to stop the erosion process and avoid wheel ruts. Sometimes pounded stone or paving stones were placed on the road, as well, to make travel easier.



Figure 4: Gunter's Chain  
Science Muesum/Science & Society Picture Library

### **A Civil Engineer:**

A **civil engineer** is a person who practices civil engineering, one of the many professions of engineering. Originally, a civil engineer worked on public works projects and was not to be compared with a military engineer, who worked only on armaments and defenses. Over time, various branches of engineering have become recognized as distinct from civil engineering, including chemical engineering, mechanical engineering, and electrical engineering, while much of military engineering has been absorbed by civil engineering.

## Critical Load Student Worksheet:

### Measuring Critical Load (#1)

**Answer the following questions on this page with your group.**

**Step One:** You have been provided with four playing cards, some scotch tape, and scissors. As a team and without altering (cutting or bending for example) the cards, devise a bridge that you think will hold up a two quart/64 oz./1.69L containers without collapsing (this will represent a carriage or wagon in the early 1800s). What is your team's strategy or plan for construction?

**Step Two:** Predict the "critical load" of your structure as you have designed it.

**Step Three:** As a team, build your structure (prototype) for testing.

**Step Four:** Your instructor will test your structure, and determine at what weight your team's structure will fail by adding measurable weights (coins, sand, other materials) until it collapses. This is your structure's "critical load." What was your structure's "critical load?" How close were you to your prediction from Step One?



## **Sources Consulted or Used for this Lesson:**

Bachleda, F. Lynne. *Guide to the Natchez Trace Parkway* (Birmingham, AL: Menasha Ridge Press, 2005).

Clark, Thomas. *The Old Southwest, 1795-1830: Frontiers in Conflict* (University of Oklahoma Press, 1996).

Davis, William C. *A Way Through the Wilderness: The Natchez Trace and the Civilization of the Southern Culture* (New York: Harper Collins, 1995).

Natchez Trace National Parkway, [www.nps.gov/natr](http://www.nps.gov/natr) (accessed May 2010)

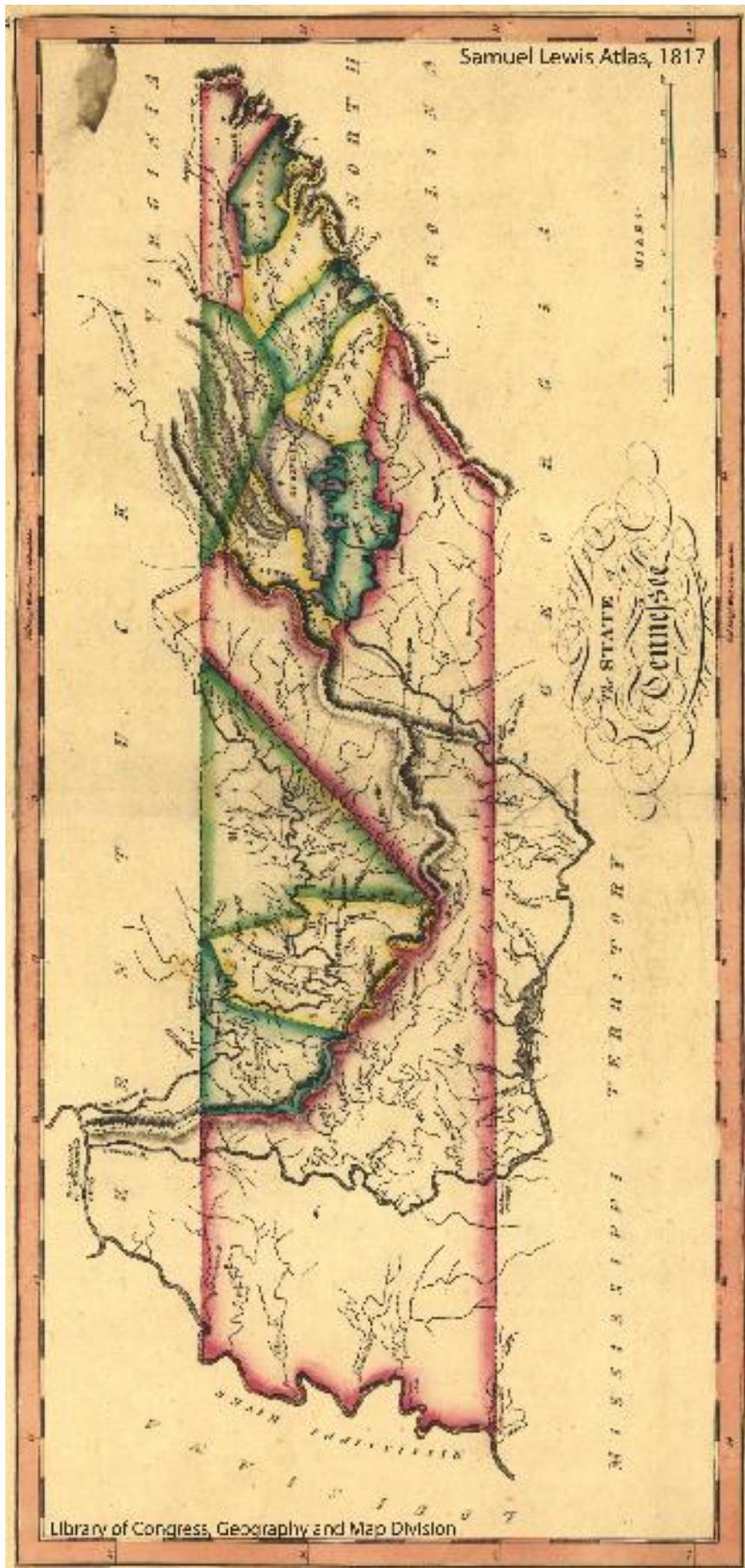
Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (Cambridge, Mass.: Harvard University Press, 1995).

Sabato, Larry. *American Government: Roots and Reform* (Longman, 2009).

Try Engineering! <http://www.tryengineering.org/lessons/criticalload.pdf> (accessed June 2010).

Activities for this lesson adapted from EdSitement.com and Try Engineering. Words in **bold** are terms that students should be familiar with during the lesson.

Author Historical Narrative: Lea Flowers Baker, Historian, Little Rock, Arkansas.



From: Santuel Lewis atlas, 1817

Library of Congress, Geography and Map Division

