

9/11 MEMORIAL

UNIT: History of the World Trade Center

GRADE LEVEL/S: 9-12

TIME NEEDED: 2-3 sessions

TEACHER: Reba Petraitis

LESSON TITLE:

THE DESTRUCTION AND REBUILDING OF THE WORLD TRADE CENTER

Common Core Standards

RH 8 Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

W8 Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

W9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

Key Questions/ Issues Addressed

Why did the Twin Towers collapse?

In what ways is the new 1 World Trade Center (1 WTC) symbolic?

What safety features are part of the architectural design of the new 1 WTC? What has been improved from the original WTC towers?

What were various challenges to rebuilding the WTC?

Lesson Goals/ Objectives

Students will analyze the collapse of the Twin Towers on September 11, 2001.

Students will compare the construction of the new 1 World Trade Center to the original towers.

Key Terms

Column bowing, Fireproofing

Materials

Access to a computer

9/11 Memorial Interactive Timeline: www.911memorial.org/interactive-911-timeline

National Institute of Standards and Technology (NIST), "Summary of Findings" from the [Final Report on the Collapse of the World Trade Center Towers](#):
www.nist.gov/el/disasterstudies/wtc/wtc_about.cfm

Case Study: One World Trade Center, New York:
www.ctbuh.org/LinkClick.aspx?fileticket=Xy%2B1TUTebVY%3D&tabid=2684

Background for lesson

NIST is a federal agency under the Department of Commerce. They periodically conduct fact-finding investigations to improve building safety in the United States. In 2002, they began an intensive study into the collapse of the towers. A report was issued in 2005.

The report can be downloaded here:
www.nist.gov/customcf/get_pdf.cfm?pub_id=909017

The following two videos can help clarify some of the principles and explanations in the NIST report:

- For a six-part video of Shyam Sunder, lead investigator of NIST, describing the collapse of the towers, see: www.pbs.org/wgbh/nova/tech/world-trade-center-collapse.html. Specifically, see Part 5: “Collapse.”
- For a short audio piece where he answers popular conspiracy theories, see: www.pbs.org/wgbh/nova/tech/debunking-9-11-bomb-theories.html.

Instructional Activity/ Procedures

1. As an introduction to both the original and new World Trade Center (WTC), direct students online to find images of the Twin Towers and renderings and construction photos of the future buildings at the site.
Note: See www.wtc.com/media/images for two photo galleries of the new site.
2. Guide them to the 9/11 Memorial Museum Interactive Timeline: www.911memorial.org/interactive-911-timeline. View the media depicting the events of the day, including the collapse of the two towers.
3. After watching, ask them to describe, in their own words, the path in which the towers collapsed (i.e. vertically).
4. Visit the website: www.nist.gov/el/disasterstudies/wtc/wtc_about.cfm to read the “Summary of Findings” from the Final Report on the Collapse of the World Trade Center Towers. This was the official report looking into the collapse of the Twin Towers. Specifically, see “Objective #1” and discuss the following questions with your class:
 - *What did NIST determine to be the cause of the towers’ collapse?*
 - *Preceding their collapses, why did the North Tower (former 1 WTC) lean to the south and the South Tower (former 2 WTC) lean to the east and south?*
 - *After the impacts, what determined the length of time until each tower collapsed?*
 - *What role did the fireproofing in the towers play on 9/11?*
5. Direct students to the following website and read the article, Case Study: One World Trade Center, New York:
www.ctbuh.org/LinkClick.aspx?fileticket=Xy%2B1TUTebVY%3D&tabid=2684.

**Instructional
Activity/
Procedures**
(Continued)

6. As a class or in small groups, answer the following questions:
 - *What is the significance of the height of the new 1 WTC?*
 - *What challenges did the site present?*
 - *What safety improvements have been made for the new building?*
 - *What similarities does the new 1 WTC have to the Twin Towers?*
7. Provide the following 2-3 page essay prompt to your students: *“You are a tourist on a return visit to lower Manhattan. The last time that you visited was in the year 2000. In your Travel Journal, document, analyze, and compare all that you have learned and observed about the site in 2012.”*

**Evidence of
Understanding**

Students’ understanding will be highlighted through their class discussion and final essay.

**Extension
Activities**

Compare pre-9/11 photographs of the Twin Towers to the new structures being built on the site. There was robust discussion in the years after 9/11 about how the site should be rebuilt. Some argued we should rebuild the towers; others thought there should be no commercial re-development. The resulting plan is a compromise of those perspectives. *What are the pros and cons of each side? Do you like the new design? How would you have rebuilt the site?* Write an essay supporting your opinions.