



## Modern Marvels: The Brooklyn Bridge

In 19th century New York, where buildings were no more than five stories tall, engineer John Roebling's soaring and majestic Brooklyn Bridge was nothing short of a technological miracle. But Roebling's innovation was an uphill battle against the elements, politicians, and the challenges of constructing the first bridge of its kind. When construction commenced in 1869, few knew that it would take until 1883 for the bridge to be completed. This one hour *Modern Marvels* documentary presents the story of the Brooklyn Bridge from blueprint to completion. Viewers will witness moving firsthand accounts from workers, hear interviews with experts, and learn about the enormous human costs of building this engineering masterpiece.

### **Curriculum Links:**

Modern Marvels: Brooklyn Bridge would be useful for courses and lectures on U.S. history, engineering, New York history and technology. It is appropriate for 7<sup>th</sup> grade and above.

### **Vocabulary:**

Using a dictionary, textbook, or online source such as History.com, ask students to define the following words before or after watching this program. Students can also write down their own lists of words to define as they watch.

- [admonish](#)
- [adversary](#)
- [deride](#)
- [diplomacy](#)
- [gangrene](#)
- [gargantuan](#)
- [incapacitated](#)
- [malady](#)
- [pneumatic](#)
- [scrupulous](#)
- [strident](#)
- [tetanus](#)

### **Discussion Questions :**

1. How did commuters travel between Manhattan and Brooklyn before the bridge? What were some of the problems commuters faced?
2. The construction of the Brooklyn Bridge encountered many obstacles. What were some of these obstacles, physical and otherwise?
3. How did John Roebling's use of iron, steel, and rope revolutionize the engineering industry?

4. John Roebling was an engineering genius, but also a very stubborn man. What were some of the consequences of his stubbornness?
5. Many workers lost their lives during the sinking of the pneumatic caissons. Why was this phase of construction so dangerous?
6. The Brooklyn Bridge provided an easy route of access between Brooklyn and Manhattan. How did the bridge change housing and migration patterns in New York City?
7. Washington Roebling's wife, Emily, was an integral part of the completion of the project. How did Emily Roebling enable the completion of the bridge? How does her life and work defy 19th century codes of feminine behavior?
8. What price did Washington Roebling pay for the Brooklyn Bridge? Was it worth the cost?
9. What was life like for a typical Brooklyn Bridge worker? What do you think were the pros and cons of this job?
10. What are some other bridges that you think are important in U.S. society? How do bridges change communities?

### **Extended Activities:**

1. Working in groups, have students create a poster or broadside celebrating the official opening of the Brooklyn Bridge and the gala celebration in 1883.
2. Ask students to construct a model of the bridge and use the model to explain how the bridge was the technological marvel of its time in a short oral presentation.
3. Ask students to write a short journal entry or letter from the perspective of a Brooklyn Bridge worker.
4. One of the unfortunate results of working on the Brooklyn Bridge for many workers was "decompression sickness" also known as caisson disease. Have students research this disease and write a short 2-3 page paper about its causes and effects.

### **Websites:**

More about the Brooklyn Bridge from History.com

<http://www.history.com/topics/brooklyn-bridge>

More about Roebling and the Brooklyn Bridge from the Library of Congress:

<http://memory.loc.gov/ammem/today/jun12.html>

A short bio of John Augustus Roebling from Bio.com:

<http://www.biography.com/articles/John-Augustus-Roebling-9461893>