

# Epic Engineering: Building the Brooklyn Bridge - Alex Gendler

## Let's Begin...

In the mid-19th century, suspension bridges were collapsing all across Europe. Their industrial cables frayed and snapped under the weight of their decks. So when German American engineer John Roebling proposed building the largest and most expensive suspension bridge ever conceived, New York City officials were understandably skeptical. Alex Gendler details the building of the iconic Brooklyn Bridge.

### Comprehension Questions for "Building the Brooklyn Bridge"

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1. What problem were the European suspension bridges facing in the mid-19th century?

**a. Cable snapping**

b. Weight of the structure

c. Unstable foundations

d. Severe weather conditions

2. Why were the elected officials skeptical about John Roebling's proposal to build the Brooklyn Bridge?

a. Manhattan was overcrowded

b. Lack of funding

**c. Previous bridge failures**

d. Opposition from Brooklyn residents

3. How did Roebling's design for the Brooklyn Bridge differ from European suspension bridges?

a. It incorporated pillars for additional support.

b. It used shorter cables for stability.

**c. It had vertical cables for added strength.**

d. It utilized a hybrid design combining different bridge types.

4. What made the span of Roebling's bridge different from its predecessors?

- a. It was longer than any other bridge at the time.
- b. It had a unique shape never seen before.

**c. It could support more weight than other bridges.**

- d. It used innovative materials for construction.

5. How did Roebling's son, Washington Roebling, become involved in the project?

**a. He took over after his father's death.**

- b. He provided financial backing for the bridge.
- c. He designed the foundation of the bridge.
- d. He served as a construction supervisor.

6. What technology was used during the construction of the bridge's foundations?

- a. Compressed air caissons

**b. Reinforced concrete**

- c. Steel beams
- d. Timber pilings

7. What challenges did the workers face during the construction of the bridge?

**a. Low lighting conditions and frequent fires**

- b. Health issues related to decompression sickness
- c. Financial difficulties and budget overruns
- d. Lack of skilled labor and engineering expertise

8. How did Emily Roebling contribute to the construction of the Brooklyn Bridge?

**a. She managed the daily operations of the project.**

- b. She provided financial support for the bridge.
- c. She designed the architectural features of the bridge.
- d. She negotiated contracts with suppliers and contractors.

9. What issue arose during the construction phase in 1877?

**a. The bridge encountered structural defects.**

b. The main contractor went bankrupt.

c. The bridge was delayed due to severe weather.

d. The cables used were not up to standard.

10. How long did it take to complete the construction of the Brooklyn Bridge?

**a. 14 years**

b. 24 years

c. 40 years

d. 10 years