

BROOKLYN BRIDGE ACTIVITY PACKET

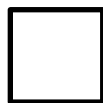
The Brooklyn Bridge was completed on May 24, 1883. To celebrate the anniversary, enjoy some of these fun activities and learning resources! Be sure to check out the video, book, and website lists on the last page!

ACTIVITY 1: WHAT MAKES A BRIDGE A SUSPENSION BRIDGE?

Watch video at <https://bit.ly/brooklynbridgevideo> for an interactive story and game that will have you moving your body and learning the parts of a suspension bridge! Alternatively, discover the engineering of the Brooklyn Bridge using the matching game below:

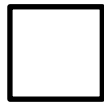


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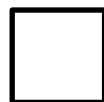
TOWER

Sturdy, vertical structure the main cables hang from



ANCHOR

Iron plates pulling the main cable ends to Brooklyn and Manhattan ground. Granite stone was piled on top.



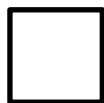
MAIN CABLE

Each made of 5,282 wires spun together; 4 in total hang from the towers



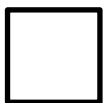
STAY

Diagonal cables extending from the towers



SUSPENDERS

Vertical cables hanging down from the main cable

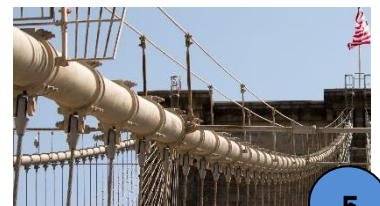


DECK

Roadway or part of the bridge people and vehicles travel on



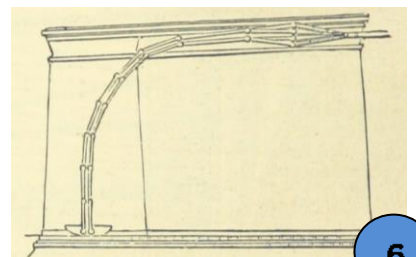
4



5



2



6

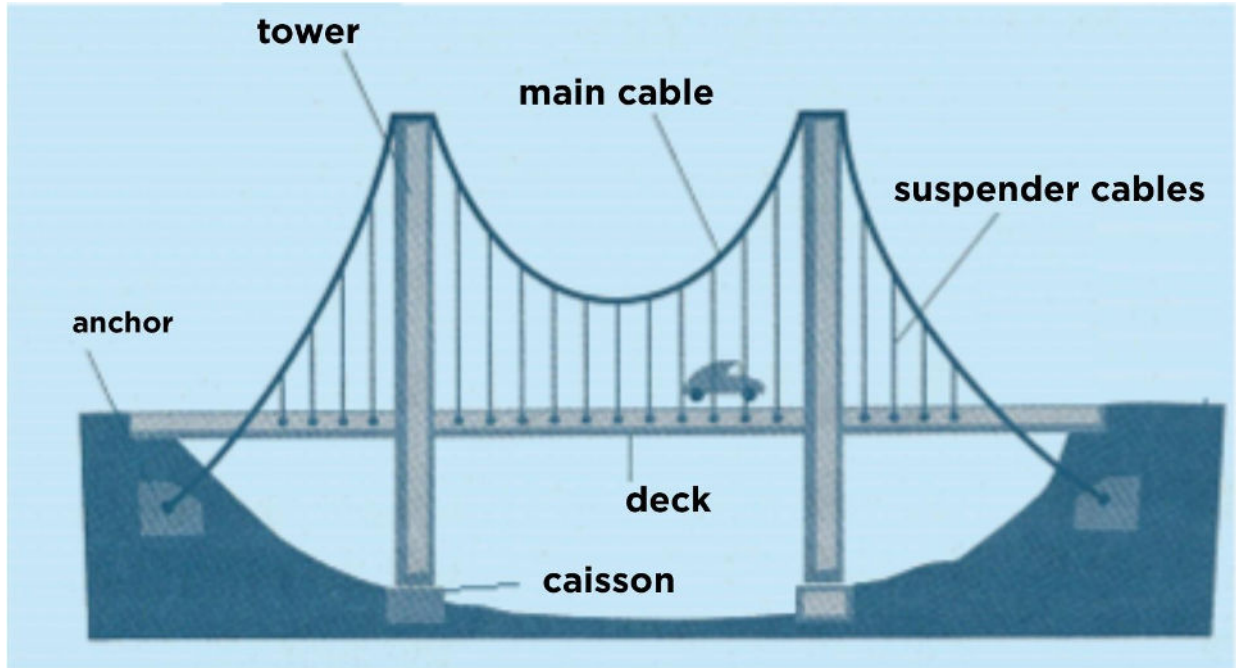


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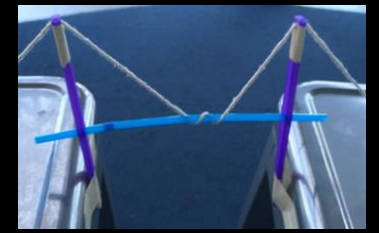
ANSWERS:
TOWER (2), ANCHOR (6), MAIN CABLE (5),
STAY (4), SUSPENDERS (1), DECK (3)

ACTIVITY 2: BRIDGE BUILDING CHALLENGE

Can you build a suspension bridge using household items? Refer to the diagram below to ensure your bridge has all the necessary parts!



We want to see your engineering masterpieces! Send a picture to education@brooklynbridgepark.org or use the hashtag #edcntr



FOR ADDED FUN: Conduct an experiment on your bridge! Do you think your bridge can hold weight? Using pennies, or other small objects test how much your bridge can hold before collapsing!



ACTIVITY 3: BRIDGE HAIKU

The Brooklyn Bridge has been inspiration for numerous artists, writers, and musicians. Everyone from Walt Whitman to Frank Sinatra have paid homage to the Brooklyn waterfront.

Now it is your turn! Create a short poem called a haiku. A haiku is always 3 lines long. The first line should be 5 syllables long, the second line 7 syllables, and last line back to only 5 syllables. Try clapping or counting on your fingers to figure out the number of syllables of each word. An example and some facts are below for inspiration!

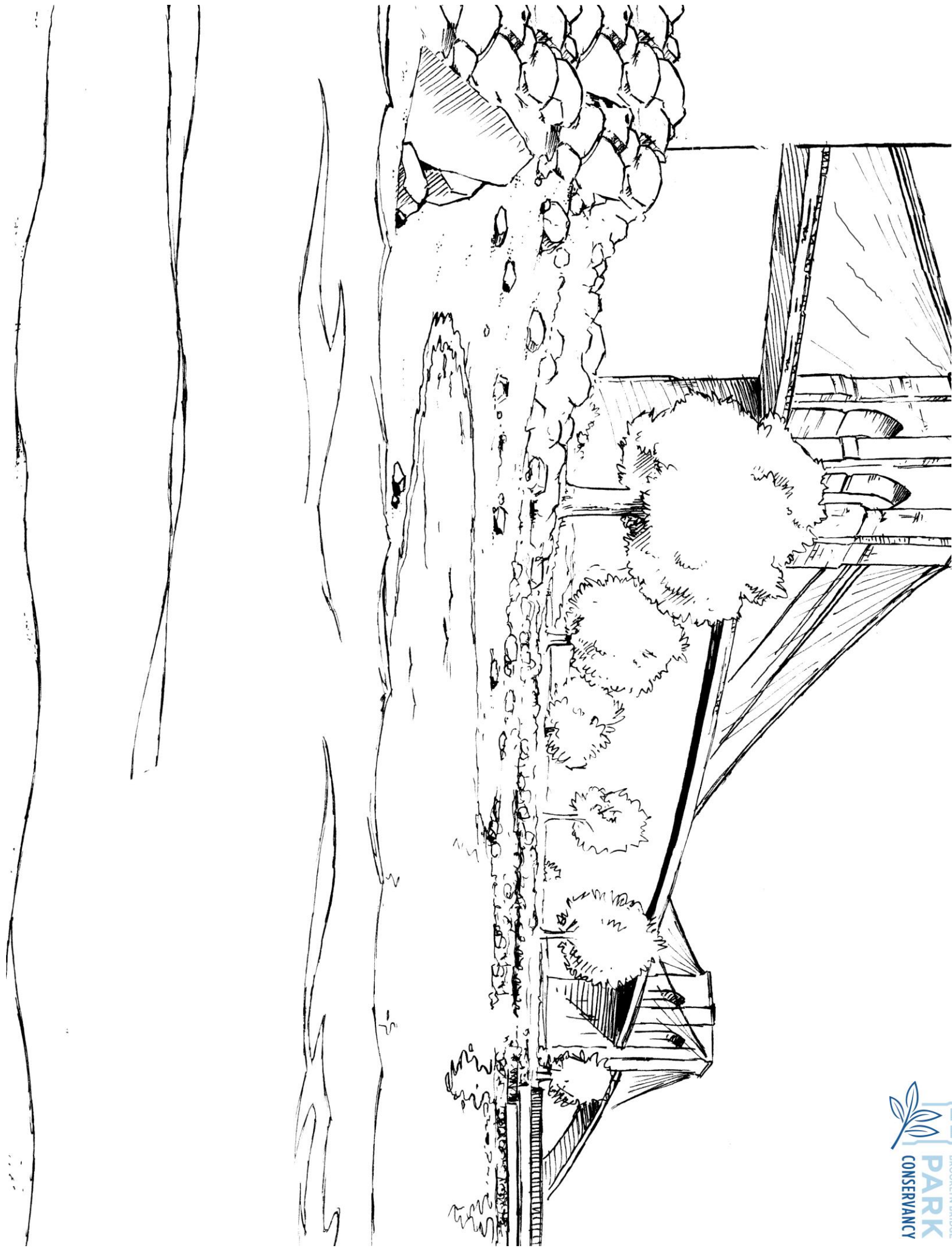
An Ode to the Brooklyn Bridge

*A majestic bridge (5)
Held up by a web of wire (7)
Many travelers (5)*

- The Brooklyn Bridge crosses over the East River- connecting Brooklyn & Manhattan.
- The bridge took 14 years to build, 1869-1883.
- In 1867, the river froze over causing city officials to seriously discuss creating a bridge.
- John Roebling, a German engineer, designed the bridge.
- His son, Washington Roebling was an expert in building a tool called a caisson to help workers reach bedrock deep underground the East River bottom. The bedrock provided a strong foundation for the towers to be built upon.
- The workers dug 44 ft deep for the Brooklyn tower & 78 ft for the Manhattan tower.
- Emily Roebling (Washington's wife) led the construction project after John and Washington passed away. She was one of very few women, at that time, who had the opportunity to get a college education and work on an engineering project.
- The first person to cross the bridge was Emily Roebling, in a horse drawn carriage holding a rooster for good luck!
- In order to calm fears that the bridge would fall if too many people were on it, P.T. Barnum led a circus parade of 21 elephants across the bridge to prove its strength.

ACTIVITY 4: BETWEEN THE BRIDGES COLORING ACTIVITY

A lot happens in the waters between the Brooklyn and Manhattan Bridges! The **East River** is home to many marine animals including **fish, crabs, and clams**. It also is bustling with boats such as **ferries, cargo ships, and even kayaks**. Pebble Beach is a favorite park spot to eat lunch and watch the tide roll in, all while sitting between two of the most iconic bridges. **Using the Pebble Beach coloring sheet on the next page, draw & color all the animals and boats you think are found in the East River!** Don't forget things seen in the sky too!



BUT WAIT, THERE'S MORE!

Have you checked out our lesson plans for teachers? Many of the activities are easy to do at home and fun for families as well!

For more experiments on bridge design and science: <https://bit.ly/BKBridge1>

For a visual study of past and present Brooklyn waterfront: <https://bit.ly/BKBridge2>

RECOMMENDED HISTORY VIDEOS

Brooklyn Bridge Cartoon Story https://www.youtube.com/watch?v=7elx_O5i1ZA

Teen Kid News: Building the Brooklyn Bridge <https://www.youtube.com/watch?v=HWw4tPUzk8c>

Encyclopedia Britannica: The Brooklyn Bridge https://www.youtube.com/watch?v=Tsi95z1Nmhg&feature=emb_title

How Stuff Works: The Brooklyn Bridge <https://www.youtube.com/watch?v=PG1qksmYA6g>

SciShow Kids: What Makes Bridges So Strong? <https://www.youtube.com/watch?v=oVOnRPefcno&t=84s>

RECOMMENDED BOOKS

Secret Engineer: How Emily Roebling Built the Brooklyn Bridge by Rachel Dougherty (Gr. K- 4)

Twenty-One Elephants by April J. Prince (Gr. 1 +)

Brooklyn Bridge by Lynn Curlee (Gr. 3 +)

The Brooklyn Bridge: The story of the world's most famous bridge by Elizabeth Mann (Gr. 4 +)

Where Is the Brooklyn Bridge? by Megan Stine (Chapter book; Gr. 4-8)

Historic Photos of the Brooklyn Bridge by John B. Manbeck

RECOMMENDED WEBSITES

Brooklyn Bridge Design Facts <http://www.nycroads.com/crossings/brooklyn/>

The History Channel- The Brooklyn Bridge <http://www.history.com/topics/brooklyn-bridge>

PBS- Brooklyn Bridge Movie & Timeline <https://www.pbs.org/kenburns/brooklyn-bridge/>

Famous Brooklyn Bridge Poetry <https://theculturetrip.com/north-america/usa/new-york/articles/an-ode-to-new-york-8-poems-describing-the-brooklyn-bridge/>