

STEM Challenges MMXX

BUILD:

Exploring Structures: Bridge Building Challenge

CHALLENGE: **Bridges** were created to grant humans passage over obstacles such as bodies of water, valleys, and other natural terrain. Use materials found around your house to create a bridge. Test your bridge with additional objects from home. Does your bridge withstand the weight of a toy car or other small object? Can you build a bridge that is strong enough to hold the weight of two books?

BIG IDEA: The earliest bridges date back to the ancient Greeks. Today we use bridges to navigate our everyday lives. Have you ever heard of the Golden Gate Bridge or the Brooklyn Bridge? These are two of the most famous bridges in the United States. Although not as well known, we have lots of bridges here in St. Louis. They may not be as famous as the Golden Gate Bridge but they sure are useful!



Golden Gate Bridge, San Francisco, CA



Brooklyn Bridge, Brooklyn, NY



Eads Bridge, St. Louis, MO

Materials:

Materials can be anything you find around your house. Some suggestions are:

Straws

Toothpicks

Marshmallows

**Uncooked spaghetti
noodles**

**Paper towel or toilet
paper rolls**

Newspaper

Index cards or paper

Tape

INSTRUCTIONS:

1. Collect materials from around your house to create your bridge.
2. Use one of the photos provided or look up an example of a bridge online.
3. Bend, twist, fold, and tape your materials together to create a bridge.

Here are some examples of bridges that could be built at home.



Want to know more?:

<https://youtu.be/oVOnRPefcno> - What makes bridges so strong?

<https://youtu.be/5C3VG0RdNPo> - Why are there so many different types of bridges?

<https://youtu.be/WKphjf3VZha> - History of Golden Gate Bridge

<https://youtu.be/UoRdCtvJF6A> - History of Eads Bridge

WE WANT TO SEE & SHARE YOUR CREATIONS!

Send us a picture or video by February 15, 2021 and be entered into a drawing for a gift card!

Three ways to share:

1. Tweet us using the hashtag #aBitofSTEM
2. Text us at 314-285-9663
3. Use this google form and we'll show off your creation. [Submit Here](#) (tinyurl.com/STLsubmit)

For more challenges visit: STEMchallenges.wustl.edu