



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

build a bridge with popsicle sticks and glue, you will then evaluate the effectiveness of your bridge design.



Supplies Required:

50-100 Popsicle Sticks
Glue
Standard 1-5 pound weight (books, exercise weight, or another weight that can be standardized)

*You can use other materials around the house to build your bridge

Video

Popsicle bridge: <https://tinyurl.com/v5yed8m>
Popsicle bridge (parabolic) - <https://tinyurl.com/rzzzh6m>

Overview

Bridges are engineered to withstand weight, while being durable, and in some cases aesthetically pleasing. Also, engineering has impacted the development of bridges over time, including innovative designs and the challenge of creating bridges that become landmarks for a city.



Instructions



1. Gather all of your materials.
2. Develop a plan for the bridge.
3. Draw your plan.
4. Execute your plan and build your bridge. You might need to rethink your design, or even start over.
5. Test your bridge, see if it can withstand the weight of a chapter book or any other object from 1 – 5 pounds.

Additional Resources

Read and explore about catapults and how they work!

1. Types of Bridges - <https://tinyurl.com/sqbgwrz>
2. Famous Bridges - <https://tinyurl.com/o9rbvel>

Share It Out

Talk about it with your family and friends. Did you succeed in creating a bridge that held the required weight for a full minute? If not, why did it fail? Did you decide to revise your original design while in the construction phase? Why? How many popsicle sticks did you end up using? Did this number differ from your plan? If so, what changed?

Share on social media: record a video or take a picture of your bridge and post the results online using the hashtags:

#canyoubuildit
#bridgechallenge
#projectexploration
#stemathome

Tag a friend and challenge them to build their own bridge!

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 401. Learn more at www.projectexploration.org/explore-store

Join PE's character contest! Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists. Learn more at www.projectexploration.org/character-contest.



Call or text us for help: 312-772-6634



www.projectexploration.org