

# Bridge Construction Research and Maker Activity (9-12)

## Summary

Students will engage with different text and media sources to extract information. They will use the new information to create bridge out of toothpicks.

## Main Core Tie

Secondary Library Media (6-12)

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## Time Frame

2 class periods of 70 minutes each

## Group Size

Small Groups

## Materials

Each group will need access to at least one Chromebook or similar device to access the internet. They will need several boxes of toothpicks, glue, wax paper and a permanent marker.

## Background for Teachers

Teachers will want some level of familiarity with makerspaces or maker activities.

## Student Prior Knowledge

Students may also want to view the maker video ahead of time.

## Intended Learning Outcomes

Students will engage with several sources in order gather enough information to design a sturdy, 1-2 ft. long bridge out of glue and toothpicks. They will use a printed article from Utah's Online Library, Google images, peer interviews, and more to gather, extract, and apply information.

## Instructional Procedures

Half of the class will be given a "Bridge Interview & Research Handout." They will find a partner in the class to interview.

After the interview, the partners will progress through the steps of the handout. They'll read the "Bridge Basics" article and do some further online research.

Once they have background information, they will join another partnership (to make a group of 4) to develop a plan to build a 1-2 foot long bridge out of toothpicks and glue.

Groups will work together to construct a bridge. The next day (after the glue has dried) a variety of objects will be placed on the bridge to test their strength. The group whose bridge holds the most weight without breaking will win a prize.

## Strategies for Diverse Learners

Teachers may choose to do a partner read for the "Bridge Basics" article in which students take turns reading and the listener summarizes. This may help struggling readers with comprehension.

## Assessment Plan

Bridges will be tested for how much weight they can bear. Students will also be asked to write a reflection on the process when they are done.

Authors

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