

I-70 Rocheport Design-Build STEM Outreach Program
Notes for Teachers: Middle and High School
Lesson One

There are two different types of activities for students at the high school level:

- Building a soda straw bridge
- Using a computer program to design a bridge.

Both these activities should take 1-2 hours for the student to complete. The computer program activity has an optional report the students can write to discuss the results of their bridge design. However, there are a lot of other interesting activities that can work with the “How bridges work” presentation. You may consider one of these as an alternative to fit the needs of your class.

Other useful bridge activities from Teach Engineering are:

- Building different types of bridges using cork boards and skewers:
https://www.teachengineering.org/activities/view/wpi_bridge_joy_act
- Build wooden truss bridge using wood dowels and craft sticks – in-depth design and testing:
<https://www.teachengineering.org/activities/view/ind-2472-truss-truss-design-wooden-bridge-activity>
- Build bridges using soda straw – similar activity with good video:
https://www.teachengineering.org/activities/view/cub_brid_lesson01_activity2
- Use math to solve the forces in a truss bridge:
<https://www.teachengineering.org/lessons/view/ind-2472-analysis-forces-truss-bridge-lesson>