

Build a Bridge Mini Challenge



Problem Scenario: Ohio Department of Transportation intends to build new bridges in several locations in the next few years and they need your help to design bridges that are aesthetically interesting, safe and functional. The span of the bridges will vary by location.

Challenge:

Create a 18 inch prototype for a bridge.

Criteria:

- You may only use the materials provided (spaghetti and marshmallows)..
- You will have 20 minutes to design, build, and document your solution.
- The bridge must be free standing
- The bridge must span 18 inches
- The bridge must be able to hold the equivalent weight of a cell phone

1. Brainstorm: Use the space below to brainstorm the design and approach to building a bridge.

Questions to consider:

- What kind of bridge will you design? Beam, Arch, Truss, Cable-Stayed or Suspension?
- What information do you need about bridges to complete this challenge?

2. Design:

Sketch your bridge design below.

4. Evaluate:

- Did your design result in a standing bridge?
- What are some ways to improve your design and make your bridge stronger?

5. Modify:

- What modifications need to be made to make your bridge stronger? more stable?
- What can be eliminated in your construction to achieve the same strength?
- What is the maximum amount of weight you can achieve?

3. Build:

Implement your design.

6. Share:

Share your creation on Social Media!

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