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Straw Bridges Worksheet

Materials

- 20 plastic drinking straws (not the bendy type)
- scotch or masking tape
- scissors
- measuring stick or ruler

Ask

1. In your own words, what problem are you trying to solve in this activity?

2. What are the constraints for this activity?

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Research

3. Write down what you have learned about truss bridges.

Imagine

4. Based on the constraints and your research, brainstorm ideas of the bridge you want to build. Compare your ideas with your teammates and pick the design you want to try first.

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Plan

5. Draw the design your team determined to be the best solution to the problem in the space below. Label the materials you are going to use.

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Create

6. Build your bridge.
   a. What worked with your design?

   b. What didn't work with your design?

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Test

7. Test your bridge prototype and see how much weight it can hold.
   a. How much weight did your bridge hold?

   b. What do you want to change about your bridge to make it stronger? Why?

Improve

8. In the space below, draw a picture of your improved design.

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Retest

9. Test your improved bridge design and see how much weight it can hold.
   a. How much weight did your new, improved bridge hold?

   b. Did you make changes to your original design? Explain why and how that affected your new car.

   c. What do you want to change about your bridge to make it even stronger? Why?

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