The Structure of Bridges

Think about bridges. Are they important? When do you go over a bridge? Are they strong or weak? What kind of bridge do you think is the strongest? Discuss these questions in your team for about 5 minutes.

In order to see which kind of bridge is the strongest, you are going to test several bridge designs, including your own design. Follow the directions below to test the bridges on the Bridge Design Sheet.

1. Cut out the 4 bridge shapes from the Design Sheet. On the last bridge shape, draw and cut out any shape you want for the sides of the bridge.
2. Fold the sides up on the bridges that have sides.
3. Place each bridge on two blocks so that the shaded area is on the blocks and the circle is between the two blocks. See the picture below.
4. Put pennies on the circle in the center of the bridge.
5. Record the number of pennies that make the bridge start to sag on the Data Table.
6. Record the number of pennies that cause the bridge to collapse on the Data Table.

DATA TABLE:

<table>
<thead>
<tr>
<th>Bridge Design</th>
<th>Number of pennies to change the shape</th>
<th>Number of pennies to collapse</th>
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