

Paper Bridge Penny Challenge

You will need:

- pennies (or other weights)
- two pieces of paper
- scissors
- ruler
- books
- tape



You are tasked with creating the strongest paper bridge possible across an 8-inch gap. Your bridge must be at least 2 inches wide. You may use tape on the top of the bridge but none on the bottom or sides. The bridge can not be taped to the edges of the gap.

Think:

What are some bridges that you have seen? What do they look like? Sketch them below.

Research:

Research the types of bridges. List three below and describe each.

Design:

What design do you think will work best given your supplies and requirements? Draw a prototype below, including measurements, and explain the structure.

Build:

Build your bridge and test it out by placing as many pennies as you can on it until the bridge collapses. Record your results below.

Results, Bridge 1:

Greatest number of pennies held on the first trial:	
Greatest number of pennies held on the second trial:	
Greatest number of pennies held on the third trial:	
Average number of pennies held for the combined trials:	



Improve:

How could you improve your bridge? Draw your idea and explain the improvements below.

Results, Bridge 2:

Greatest number of pennies held on the first trial:	
Greatest number of pennies held on the second trial:	
Greatest number of pennies held on the third trial:	
Average number of pennies held for the combined trials:	

How did the results differ from bridge 1 to bridge 2?

What could still be improved with your bridge? Why?

Extension: Research famous bridges from around the world. Which one is the longest? Which is the widest? Which is the most beautiful to you? How can you find out which is the strongest? Which is the oldest bridge in the world?