

Cookie Bridge

Tonight, we are stepping into the shoes of engineers! We will utilize the Engineering Design Process (EDP) to explore, create, and problem-solve. Remember, the EDP is repetitive, allowing us to repeat steps to improve our prototypes. Embrace mistakes and failures, as they are valuable learning opportunities! Our challenge is to create a free-standing bridge using cookies. The cookie bridge must be able to support at least one cup of water.

Step 1: Define the Problem

- What is our challenge today? What problem are we trying to solve?

Step 2: Plan Solutions

- How can we design a cookie bridge capable of supporting a cup of milk? What are some of your ideas?

Step 3: Make a Model

- Using your planned solutions, construct a cookie bridge.

Here's a hint: Think about weight when building your bridge. Weight is distributed evenly throughout the length of a real bridge to make sure it does not collapse. Think about how you can design your bridge to be structurally safe!

Step 4: Test the Model

- This is when you will have an adult place a cup of water on your bridge. Adults please keep a hand close to the cup to avoid spills. Remember to avoid electronic devices. Did your bridge support the weight? Share your outcomes.

Step 5: Reflect and Redesign

- Did your bridge succeed? What worked well? If redesigning, what changes would you make? How can you enhance the bridge's capacity? Can you modify its height?