Short Activity
Ages 6–8
20 minutes

Wild Bridges

Description

Design and create bridges inspired by nature.

Competencies

- Working collaboratively
- Development of fine motor skills
- Planning skills
- Problem solving

Materials

- Plastic building blocks, craft sticks, or any other material suitable for building
- Glue
- Optional: shoeboxes, building blocks or books
- Optional: Bristol board, playdough and books if attempting the "Test a Truss" experiment (see *Implementation* Step 4)

Preparation

- Prepare the room for a program that uses glue
- Print out or photocopy pictures of different types of bridges, such as beam, arch, suspension, and truss, or use the bridge template

Implementation

1. Participants attempt to create the bridge of choice using Lego, craft sticks, or any other material suitable for building
2. If desired, set up two shoeboxes or blocks or books as far apart as you want the bridge to span and attempt to bridge the gap
3. When your bridge is complete (and the glue is dry, if necessary), test it with objects of varying weights to see how strong your design is; analyze your bridge and rebuild it so it will hold more weight, if needed

4. For an added STEM (Science, Technology, Engineering, and Math) challenge, attempt the "Test a Truss" experiment on page 21 of *Wild Buildings and Bridges* by Etta Kaner, also copied here:
    a. Make 10 or more 2.5 cm balls of playdough (a little smaller than ping-pong balls)
    b. Stand two piles of books 18 cm apart
    c. Place two strips of Bristol board (15 cm x 30 cm), one on top of the other, across the gap to form a bridge. How many balls of playdough do the strips hold?
    d. Accordion-fold one of the strips of Bristol board lengthwise. Place it across the gap with the other (flat) strip on top. How many balls does your bridge hold now?
    e. Talking point: This experiment demonstrates the strength of the Truss bridge

Book Suggestions

Rivers, Seas and Oceans by Mack
Wild Buildings and Bridges by Etta Kaner

Images and Templates