BUILD A BRIDGE

ACTIVITY

EXPLORE THE PROPERTIES OF DIFFERENT MATERIALS!

Test different bridges and figure out which bridge is strongest.

MATERIALS

- 3 different materials for making bridges, such as:
  - computer paper
  - notebook paper
  - aluminum foil
  - cereal box
  - wax paper
  - parchment paper
  - a folder
  - recycled paper

  You will need 2 sheets of each material.
- 40 small weights such as pebbles, metal washers, marbles, etc.
- 2 objects of the same height to support the bridge, such as books, building blocks, canned goods, etc.

DIRECTIONS

1 SET UP

- Cut all materials to be the size of a piece of computer paper or notebook paper, about 11 inches long and 8½ inches wide.
- Fold one bridge for each type of material (see below for instructions).
- Set up two testing areas on a table. TEST AREA 1 has one sheet of each material. TEST AREA 2 has folded bridges, weights, and objects to support the bridge.

2 GOAL

Your child will **test** the different materials and **predict** which bridge can hold the most weights.

3 EXPLORE

Encourage your child to **observe** and **test** the different materials at TEST AREA 1. Your child can bend, rip, and crumple each material. Ask your child to **predict** which material can hold the most weights.

4 EXPLORE

Your child can choose one type of bridge at TEST AREA 2. Ask your child to put the bridge across the two objects of the same height. Ask your child, *How will you know when the bridge breaks?* Show your child how to place the weights carefully all the way across the bridge.

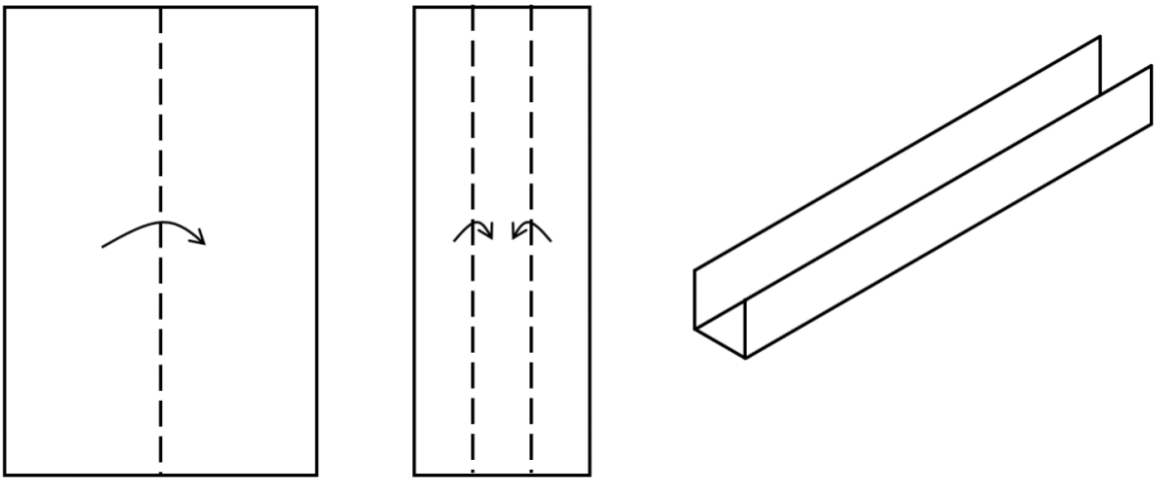
5 EXPLORE

Your child can place more weights on the bridge until the bridge breaks. Count how many weights were on the bridge when it broke. Then your child can **test** the rest of the bridges the same way.

6 SHARE

Ask your child to talk about what they **observed** during the bridge test. Encourage your child to **explain** which material made the strongest bridge.

BRIDGE DIAGRAM



FOLDING THE BRIDGE

1. Fold a piece of paper in half lengthwise to make a double layer.
2. Fold up each edge of the paper to make a U shape.
3. Crease the folds so the paper keeps the U shape. If needed, use tape on the edges to keep the shape.

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