

## THREE BILLY GOATS GRUFF

The Three Billy Goats Gruff are very hungry! And the grass is definitely greener on the other side of the stream. Their problem is that the troll that lives in the water is also very hungry and his favorite food is goat meat! Can you help the Billy Goats safely cross the stream and not become a meal for the troll?

**Set-Up:** Place two large and heavy supports one foot apart (inside dimension) on a table. (These could be big books or small cement blocks or whatever is convenient.)

**Challenge:** Design and build a bridge that can support all three Billy Goats.

**Time:** Part One: You will have 4 minutes to construct a bridge that spans “the stream” (the distance between the two supports) and is strong enough to carry all three Billy Goats. The bridge may not be attached to the supports on either side of the stream.

Part Two: You will have 1 minute to test your construction by placing each of the three Billy Goats on the bridge, adding one at a time.

**Materials:** three small stuffed animals to test the bridge (the “Billy Goats”)  
four sheets of plain paper  
six straws

**Scoring:** up to 25 points for the innovative use of materials  
points for weight held:  
20 points if the bridge holds one animal  
30 points if the bridge holds two animals  
50 points if the bridge holds all three animals  
up to 25 points for positive team work

**Special Note:** This challenge can be made more interesting by changing the materials or by adding more weights. Try several variations to investigate the qualities of different building materials!

Idea contributed by Cindy Tibbetts, Recovering Structure TM. Thanks!