

Materials: Pasta Bridge Activity

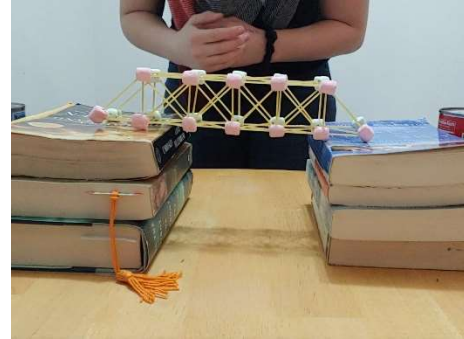
BUILD YOUR BRIDGE

Required:

1. Dried angel hair or spaghetti noodles (~15 unbroken noodles)
2. About 50 (1/2 cup) mini marshmallows. Somewhat stale is best!
3. Printed Truss Design or paper and a ruler (inches).

Optional:

4. Scissors
5. Pencil or sharpie for marking pasta.
6. Cups/bowls to hold pasta and marshmallows
7. Wet wipes (marshmallows get sticky).



Substitutions:

**If dried pasta is not available, you can substitute by taping toothpicks together to the desired length.*

**Marshmallows are used like a glue to hold the pasta together. If you do not have mini marshmallows, you can substitute campfire marshmallows sliced into small pieces and dusted in flour/confectioner's sugar to reduce stickiness, soft gumdrops, or hot glue (with caution!).*

TEST YOUR BRIDGE:

Required:

1. Ruler or 8.5"x11" sheet of paper for measuring.
2. Two stacks of solid books, games, tupperware etc. at least 3" tall. Stacks should be the same height on either side.
3. Weights: Could be coins, rocks, cans of food, etc. Expect a maximum weight of 5lbs.

Optional:

4. Kitchen scale (for weighing the bridge and the weights)
5. Notepad and pencil for tracking weight added.
6. Cardboard and/ or string to create a platform for stacking and/or hanging additional weight from the bridge.

Tip: *Think of how you want to load your bridge and what kind of weights are available in your home. How big/heavy are they? If you cannot find many items suitable to be stacked as weights, consider doing this activity using angel hair pasta. Angel hair is weaker than the others, and therefore will likely break (dramatically!) under lower weight limits. Making the strongest bridge is not the point of this activity since any design could be made stronger simply by upgrading materials. The real fun is watching where your truss fails and then assessing how the forces were working within the shape of the truss!*