



Tower Building Games

(suggested age: 4+)

Gather

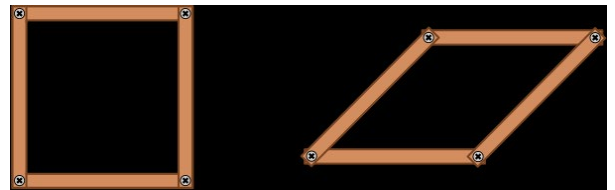
- Tower materials: playing or index cards, spaghetti, toothpicks/sticks, marshmallows/play dough

Let's Play!

1. Decide if you will be playing collaboratively or competitively: if collaborating, that means players play together toward the same goal such as height; if competitively, that means players play against each other, such as making a tower taller before a timer runs out.
2. Gather your materials and make sure you have enough for each player to use without running out of building supplies. Get creative, your tower can be made out of just about anything you can find!
3. Ready, Set, Build! Whether playing competitively or collaboratively, see if you can engineer the tallest or strongest tower.
4. Who wins? You decide the rules and the goal - are you trying to make the tallest tower or the strongest one? Measure your results with rulers or weights and crown a winner.

How Does it Work?

You may notice when building your tower that triangles are stronger shapes than squares. Triangles are a simple yet **rigid** shape, meaning it is difficult to push it over or into another shape. Other shapes, like rectangles, can be bent at the corners into a parallelogram, like in the pictured at right. If that occurs in your structure, it will fall!



Take it Further!

If you want to make building a bit more challenging, make a math game by using playing cards. Challenge yourself to add two cards together or multiply two cards together before making a triangle and placing it on your tower. You can even add up the total of the whole tower when you're done. When taking it down, subtract or divide the cards as you take your tower down. Check your math for the build-up and tear down...they should match! For more information and other activities, visit:

<http://www.pbs.org/wgbh/buildingbig/index.html>

<https://wild.maths.org/power-triangles>

https://www.teachengineering.org/activities/view/cub_intro_lesson01_activity1