

Group Projects: 2nd-5th Grade

Materials:

1. Raw Uncooked Spaghetti
2. Marshmallows

Split into groups of 4-6 people.

Goal:

Use the spaghetti as columns and beams, and the marshmallows as joints to create the tallest tower in the room. You are limited to the materials given to you, and cannot get more if you run out.

Group Projects: 6th-8th Grade

Materials:

1. Pack of index cards
2. Ruler
3. Paperclips

Split into groups of 4-6 people.

Goal:

Using the index cards, create a structure that is at least 8 inches high (measured from tabletop to the topmost index card). Use the paperclips to join the index cards. You can fold each index card only once. You also may not use more paperclips than index cards (for example, if you use 20 index cards, you can use a maximum of 20 paperclips).

When completed, we will put weights on top of your structure to see how much weight it can hold before it collapses.

Group Projects: 9th-12th

Materials:

- 1) Index Cards
- 2) Paperclips
- 3) Ruler
- 4) Price Sheet

Goal: Using the index cards, create a structure that is at least 8 inches high, with maximum base dimensions of 2 ft by 2ft. The structure needs to be strong enough to hold a textbook on top of it for 30 seconds without collapsing. There is a catch though: you are also designing for cost. In the real world, structures need to be strong, yet affordable. The team which can support the book, but has the lowest “construction cost” wins. Use the price sheet below to keep track of your costs. Each Index card costs \$20,000. Each fold in the index card costs \$5,000. Each paper clip costs \$2,000.

Have someone in your group put tick marks on the price sheet to count how many index cards are used, how many folds are made, and how many paper clips were used while making the structure.

Price Sheet

| Item | Amount | Cost/Amount | Cost |
|-------------|--------|-------------|------|
| Paper Clips | | \$2,000 | |
| Index Cards | | \$20,000 | |
| Folds | | \$5,000 | |

| | |
|------------|--|
| Total Cost | |
|------------|--|