

AT HOME STEM CHALLENGE #1

NOVEMBER

Challenge Overview

Goal: Build the tallest tower possible out of 10 index cards and submit your design!

Materials:

- 10 3"x5" index cards
- Measuring tool such as yardstick, or tape measure
- Scissors

Rules:

- You **can**: fold the cards, stack the cards, cut the cards, roll the cards
- You **cannot**: use tape/glue/staples or use any other materials besides the 10 index cards.
- The structure must be entirely supported by a flat surface, the one that you measure the final height from. The structure can't be glued, taped, stapled, or attached to the surface in any way.
- The tower should stand on its own.

Awards

- Tallest Tower: 1st, 2nd, and 3rd place announced for K-4th grade, and 5-8th grade.
- Most Creative Solution: 1 winner for K - 8th Grade.

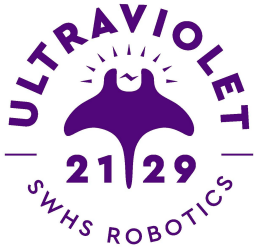
Guided Notes (optional):

You may choose to follow along the engineering design process guided notes if that helps with coming up with ideas.

How to Submit:

Fill out this Google form: <https://forms.gle/2oQh2bt9teRhBoR69>

Or, Go to swrobotics.com



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OCTOBER 12 - 21

Engineering Design Process Guided Notes (optional)

1. Brainstorm

Draw out your ideas

2. Estimate

How tall do you think your tower will be? _____ (add units)

Why do you think this?

3. Create

Start building your tower with the design you created! Once it is made, take a picture of your tower.

4. Evaluate

How tall is your tower? _____ (remember units)

What went well?

What didn't go well?

5. Improve

Draw a new design (it can be completely different from your last, or it can be the same one with some differences to make it taller):



Do you think this design will work better? Why?

6. Re Create:

Construct your new design and remember to take a picture of it standing!

7. Re Evaluate

Which design was taller? **1** or **2** (circle one)

How tall was the tallest design? _____ (remember units)

What characteristics allow your tallest tower to be as tall as it is?

8. Submit

Once you have completed this notes sheet, complete the Google Form, and upload an image of your tallest tower.