



REMINDER

<http://bit.ly/CS4HS-RU4CS-FEEDBACK>



Marshmallow Challenge

<https://www.tomwujec.com/design-projects/marshmallow-challenge/>

Tom Wujec February 4, 2015 [Design Exercise](#), [TED](#)

[Introduced to CS4HS 2017 Participants](#)

[Fran Trees](#)

Marshmallow Challenge

Build the Tallest Freestanding Structure



- Teams of Four People
- Eighteen Minutes
- Using the Following Ingredients



20 sticks of spaghetti

+



one yard tape

+



one yard string

+



one marshmallow

Instructions

- Build the Tallest Freestanding Structure: *we measure from tabletop to top of marshmallow.*
- The Entire Marshmallow must be on top: *Do not eat part of it.*
- Use as much or as Little of the Kit: *You cannot use the envelope the materials come in.*
- You may break Spaghetti, String, or Tape.
- The Challenge lasts 18 minutes. *Teams cannot hold structure when time runs out.*
- <http://www.online-stopwatch.com/countdown/>

Debrief :

- Looking at the materials, what assumptions did you make? (round robin – one sentence each; max 15 seconds per person)
- When you actually went to build the structure, you discovered that...(round robin – one sentence each; max 15 seconds per person)

CSTA K-12 Standards addressed

- 2-AP-15 (6-8) Seek and incorporate feedback from **team members** to refine a solution that meets user needs.
- 2-AP-18 (6-8) Distribute tasks and maintain project timeline when **collaboratively developing** (computational) artifacts.
- What other CSTA K-12 standards are addressed?

The Marshmallow is a Metaphor for the Hidden Assumptions of a Project

- The assumption in the Marshmallow Challenge is that marshmallows are light and fluffy and easily supported by the spaghetti sticks.
- When you actually try to build the structure, the marshmallows don't seem so light.
- The lesson in the marshmallow challenge is that we need to identify the assumptions in our project and test them early and often.
- That's the mechanism that leads to effective innovation.
- <https://www.tomwujec.com/design-projects/marshmallow-challenge/>
(6:44)