



## XtraSTEM Activity- Tower Challenge

1. The challenge is to build the tallest tower with as many cups as you can.
2. Materials: 50 plastic cups or more, measuring tape, optional materials (index cards, craft sticks)
3. Introduction: Read aloud the story *Sky Boys: How They Built the Empire State Building* by Deborah Hopkinson. If a copy is not available to you, you can view the read aloud by clicking this link-  
[https://www.youtube.com/watch?v=QN\\_a6wkhFPk&ab\\_channel=ReadyReadAlouds](https://www.youtube.com/watch?v=QN_a6wkhFPk&ab_channel=ReadyReadAlouds).
4. Give the students their recording sheets to draw and plan what their tower is going to look like. This STEM activity can be done individually, in partners, or in groups.
5. When the students are ready, have them grab a bag of cups to start building their towers. Remind the students to keep track of how many cups they use for this challenge. You can give them 15-20 minutes to build.
6. Once the time is up, have the students record how many cups they used and measure how tall their tower is without letting it fall to the ground.
7. The students will record how tall their tower is on their recording sheet. Then, the students will walk around and measure their neighbor's tower without letting it fall to the ground. They will record the measurement on their recording sheet and find the difference between the measurements. They will also ask their neighbor how many cups they used.
8. Give the students time to finish filling out their recording sheet and answering the final question: Who had the tallest tower and why?
9. Have students share their results with the class or in partners.
10. If you have time, the STEM activity can be completed again with other materials. The students can try to create the tallest tower with index cards or craft sticks. This activity can also be completed multiple times throughout the year.



Name: \_\_\_\_\_

Date: \_\_\_\_\_



**Tower Challenge Recording Sheet**

Tower Design	How many cups tall is your tower?	How tall is your tower?
	<p>_____ cups</p>	<p>_____ inches</p>
	<p>How many cups tall is your neighbor's tower?</p> <p>_____ cups</p>	<p>How tall is your neighbor's tower?</p> <p>_____ inches</p>
	<p>What is the difference?</p> <p>_____ - _____ = _____</p>	<p>What is the difference?</p> <p>_____ - _____ = _____</p>

**Who had the tallest tower and why?**

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