

SA How Tall Can You Build? - Challenge

https://teachingideas.ca/2018/11/06/stem-challenge-2/?utm_medium=social&utm_source=pinterest&utm_campaign=tailwind_tribes&utm_content=tribes&utm_term=1129798278_55299104_852844

School age measures SSD - 2, 4, 5, 7, 8, 9

Challenge Materials

For this STEM challenge all you need are cups, large popsicle sticks and a plastic character.

If you don't have popsicle sticks, you can also cut cardboard into long rectangles and use in place of popsicle sticks. (It works really well!)

I used large popsicle sticks, or tongue depressors, but use what you have on hand.



Throughout our STEM activities, the children and I talk about *thinking like an engineer*, never giving up and learning from their mistakes.

I really feel like most of my students now approach these challenges with this attitude; which in many ways is more important than the actual challenge.

The Challenge

Today our STEM challenge involved building a tower as tall as possible to 'reach to the sky'.

Children were given the materials that they were allowed to use and encouraged to use as many of the materials as they could.



For this STEM challenge kids were paired up and given a stack of approximately 15-20 cups, roughly 20 large popsicle sticks and a little plastic character to build the tower for.

You don't need to include the small plastic character if you don't have one. However, it was interesting to watch how dedicated my students were in creating a tower for their character. It gave them a focus and a purpose for creating.

The character also ensured that the towers were strong and stable enough to hold the figure.

Children needed to build a tower as tall as possible and then set their character on top. As long as the character does not fall off, we call it a success. Can you create one higher?

I encouraged groups to use all of the materials that they were given. Some groups built their tower vertically, other groups liked the idea of a longer tower or building and built a long tower.

I loved seeing their visions and buildings.

Since the goal was to build a tall tower, once groups felt that they were ready and had built as tall as they could, we measured their creations. The tallest tower that was created was 9 cups high.

I love doing STEM activities for kindergarten children, and older grades, and in all 4 classes that I did this STEM tower challenge with, the first 15 minutes for almost every group was spent just stacking the cups.

This is an important step for young kids. Children need this time to explore and experiment with their materials.

They are testing out what works with the cups and sticks. Once they felt comfortable with their materials, then they really began to build.



After experimenting with the materials, groups then began using the popsicle sticks to help stabilize the levels.

It was interesting to watch group after group come to this solution.



Kids worked for the whole period, happily building and rebuilding their towers. Every group's tower fell at some point and then they built it again.

This is an important part of the challenge and an important skill for children to learn.

We ended up with quite a collection of towers. Some were tall, whereas other groups build out instead of up, but their creations were typically stronger.

This is a really simple STEM challenge that you can do at home or at school.

I love seeing the progress and strategies students use the more they are exposed to STEM challenges. The activities create great problem solvers and children that persist when presented with a challenge.

It is very rewarding to watch - both as a parent and teacher.