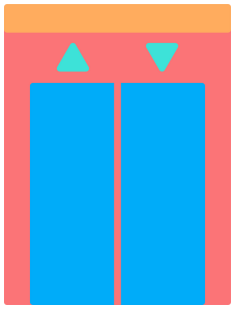
Tower - Activity Guide

Why was the invention of the elevator so significant?

There is a limit to how many flights of stairs people can/are willing to climb to get to their apartment, office, etc...especially if they are carrying heavy items.

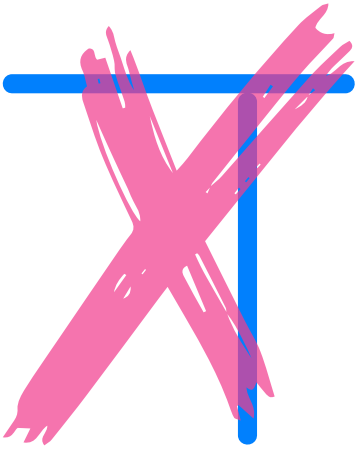
The elevator allows us to go up unlimited stories without breaking a sweat!

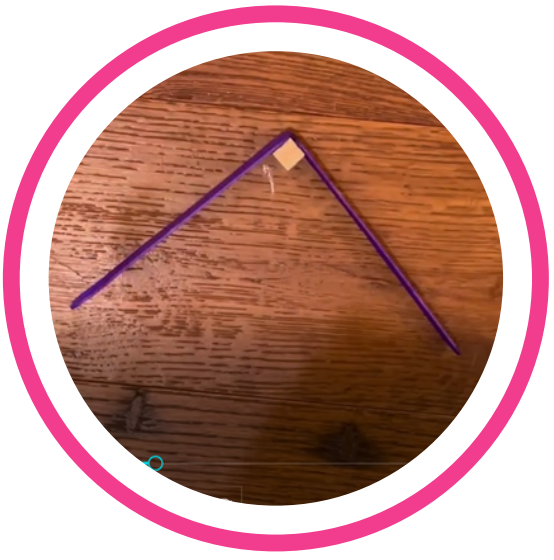


What is the #1 priority when building structures in the real world?

Safety!!

Circle good ways to connect popsicle sticks and cross out bad ways to connect them:





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Use this space to draw / brainstorm your tower idea(s):

Slenderness Ratio Calculator

Tower Height = ie: 28 inches

Tower Width = ie: 4 inches

Slend. Ratio = Height ÷ Width

Slend. Ratio = 7

Quiz

1. Why did STIIX-Ville need a new tower like this in the first place?

~A new company has bought some land and wants to build a beautiful new headquarters in the city.

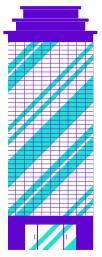
2. Name at least 2 uses for towers/skyscrapers:

~Hotels, Tourism, Restaurants. Condos/Apartments/Living, Office space, Conventions, etc.

3. Why was the elevator an important invention?

~People now had an option besides walking up lots of flights of stairs to get to a high level. That was a big burden, especially if they are carrying weight.

4. Which of these two towers has a higher slenderness ratio?



Same height, but much "skinnier"

5. List one thing you learned about the materials in skyscrapers:

ie: what they are made of, how they are customized, how they are used, etc.

~Engineers can customize their properties to make them lighter, stronger, more flexible, etc.
~Most common material is steel used in beams.

6. Why is the foundation of a building important?

~Need a strong foundation/base in order to build high. The stronger it is, the easier it will also be to build higher.

7. What do you think about a career as a structural engineer / architect?