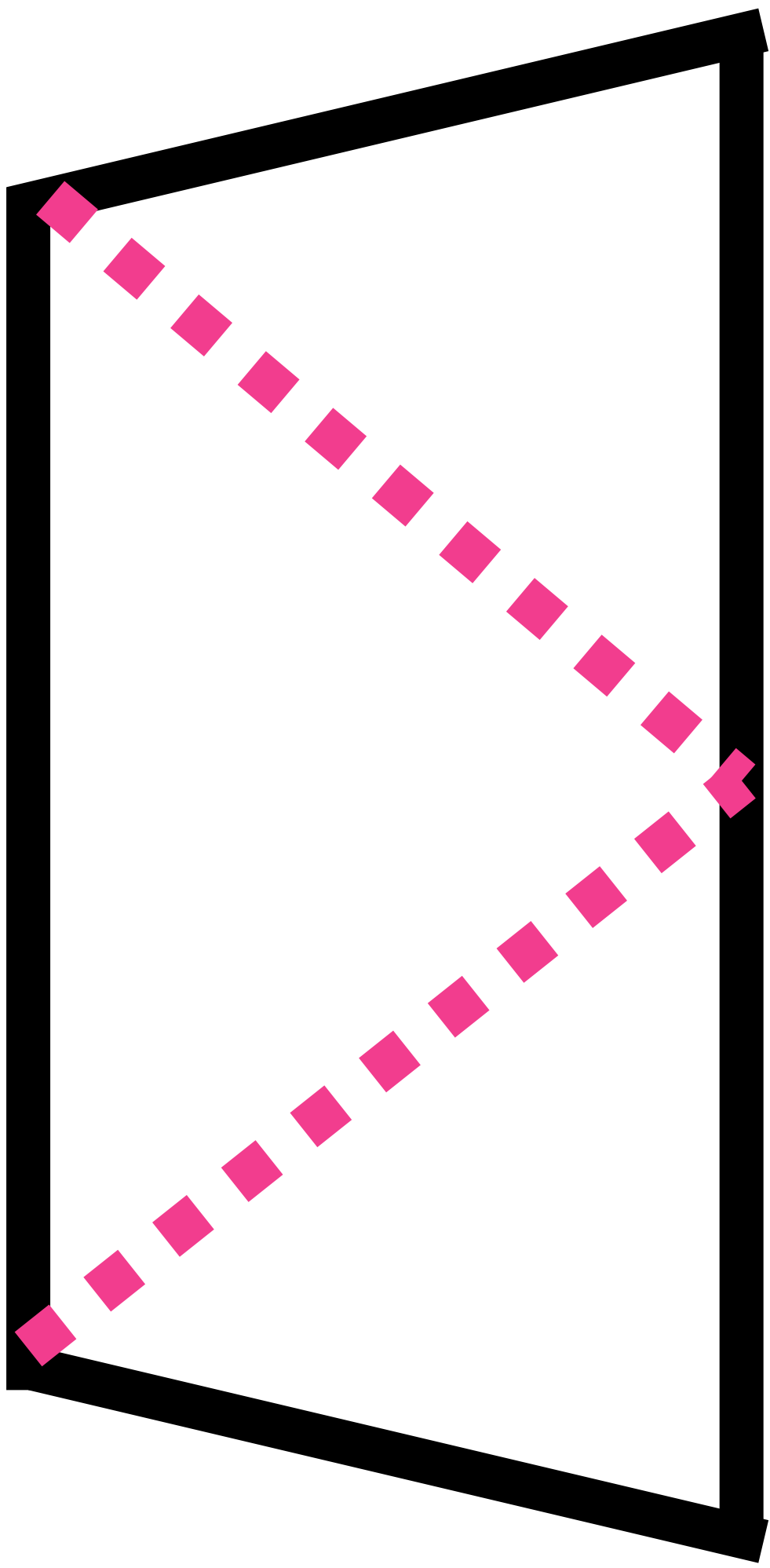


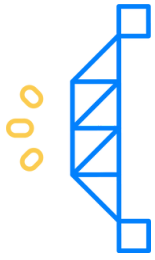


Bridge - Activity Guide

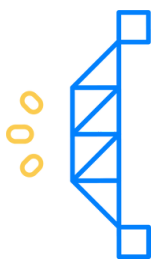


Fill out the inside of the bridge with a truss design (triangles) to then build & test.





Bridge - Activity Guide



Structural Efficiency Calculator

Make sure weight measurements are in the same unit!

Weight My bridge held:

ie:
100 grams



Weight of my bridge:

ie:
2 grams



Structural Efficiency:

50 !!

Your bridge held x50 more weight than it weighed itself!



Quiz



1. Why did STIIX-Ville need a bridge in the first place?

~The city is growing but ran into a river. They want to build a bridge over the river so they can cross over it and continue to build new homes.

2. Name at least two of the three types of materials that bridges have been made of over the years:

Wood, Iron, Steel

3. What is the definition of Force?

hint: A Push or Pull. (Both start with letter P)

4. Why did stepping on my little brother's back hurt more when I was on my toes versus when I was on the books?

~On my toes, all of the weight was in the same tiny spot (on the tip of the shoe), but when books were placed down, the weight gets distributed around the whole book so it is a much lesser force felt.

5. What is the strongest shape in the world? Do you know why?

Triangle. ~It is a rigid shape and there is nowhere for the sides to bend. Combining triangles form trusses.

6. What is a truss and why are they important?

~A truss is when you combine triangles to form a structure. The purpose is to share a load and distribute it so each beam deals with a smaller force.

7. What is the name of Tyler's job? Bonus points if you remember the company he works for!

Civil Engineer. CVL Engineering