

Week_16

Welcome Trinity Robotics, Electronics & Engineering Students.

01/17/2024

This week we will begin with a review.

Lets think about forces.

A force can be on anything and in any direction.

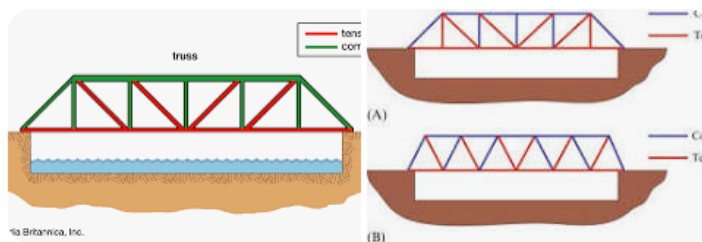
As engineers we want to design for 2 specific forces.

Tension and Compression.

On truss bridges, a **tension member is subject to forces that pull outward at its ends.** Even on a

“wooden” truss bridge,
these members are often
individual metal pieces such
as bars or rods.

Compressive forces push
or compress together and
are heavier. The individual
members form a triangular
pattern.



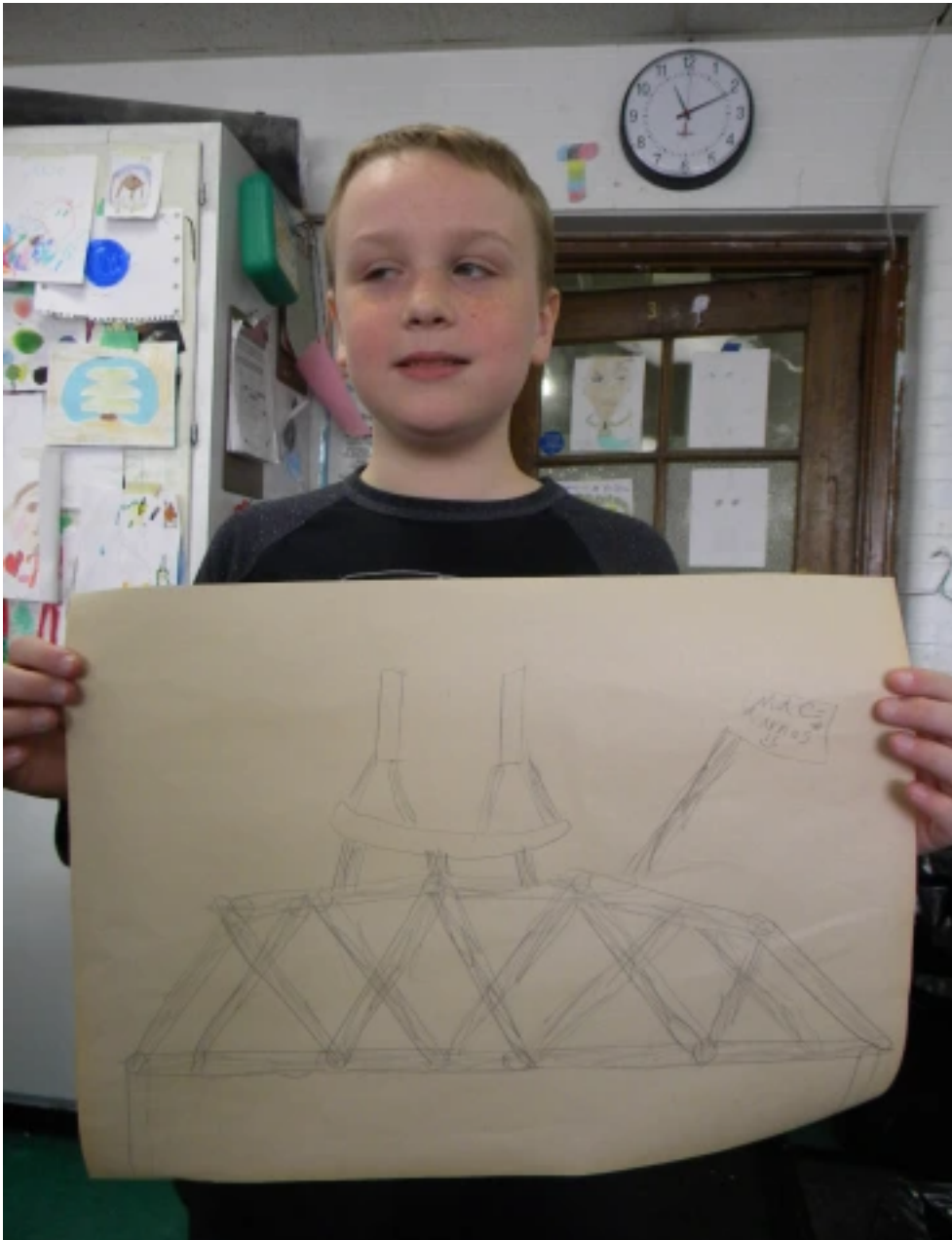
Interesting Facts About Truss Bridges

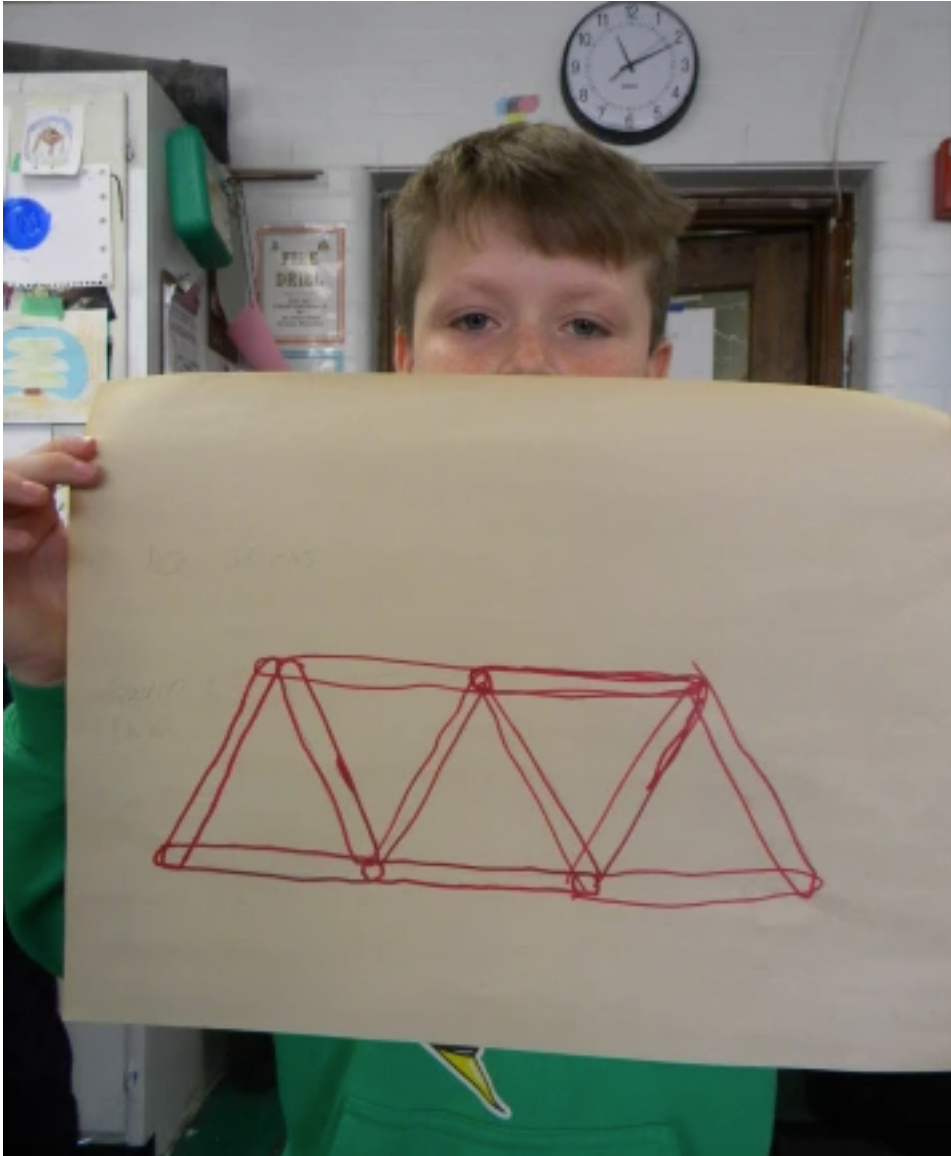
- *In the 19th century, most truss bridges were made out of stone, but it couldn't resist as much tension as iron or wood.*
- *Even railways use truss bridges for trains.*
- *Truss bridges are supposed be built over unstable surfaces.*
- *Truss bridges are one of the oldest type of large bridges in the US*

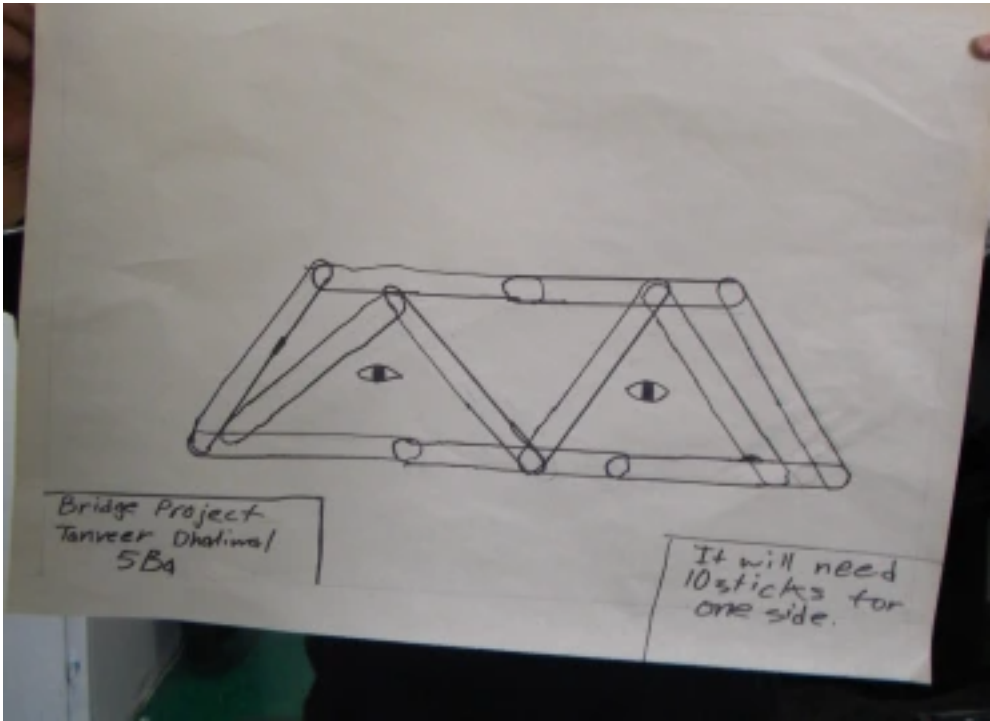




Examples:







Here is a short video:

Truss info & details

<https://youtu.be/7FgteQu43qU>

(Truss Design):

<https://www.youtube.com/watch?v=KJdlbCn4NuE>

Next we will begin our design for our
Own truss bridge...