

## Project 3

Due Wednesday, June 24<sup>th</sup> with Interim Due Date – Details Below

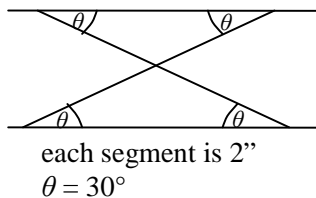
The purpose of this project is to guide you through the design process. The goal is to design a bridge or platform that can span the space between two books of equal thickness placed 6 inches apart. You can use Popsicle sticks and Elmer's glue to create the bridge, but you cannot glue the bridge to the books. The bridge should be able to hold the weight and dimension of a full 12-oz soda can placed at its center.

There are three parts to this assignment.

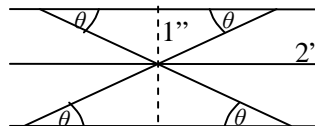
**Part 1:** Design the bridge on paper. You can design the bridge on white paper, in pencil. Show all relevant views necessary for someone to re-create your bridge. Include necessary dimensions, and be sure to use a ruler when drawing straight lines. Include a bill of materials. The bridge design is due at the beginning of class on *Monday, June 22<sup>nd</sup>*. Keep a copy of your design so you can use it to build your bridge.

**Part 2:** Construct your bridge according to your design. If you have to make any changes to your design, keep a log of what those changes were and why those changes were required. The log should be typed, while necessary pictures can be drawn in pencil, using a ruler. Use the following example as a format (with the exception that your pictures should be more detailed than those below):

**Change Order 1:** Increased number of supports in center of bridge. Design had insufficient number of supports to balance the can. Changes of center support is as follows (top view):



**Initial Design**



**Improved Design**

Bring your bridge and change log (if you have one) to class for testing on *Wednesday, June 24<sup>th</sup>*.

**Part 3:** I will test all bridges during my office hours after class. Your bridge must be able to hold the weight and shape of a full 12-oz soda can. If your bridge collapses, or does not match the design, with any reported change orders, you will not get full credit for the assignment.