Date:10/9/14

# Wednesday Challenge Form

## Group Members: Ara Justin Matthew

## Problem Statement: Make and design an arch bridge that has a Length that, when normalized by the length of one unit of brick that is used, is As long as possible.

## Approach: So we had various approaches to this problem. Our First design consisted of a bridge that had a stair shape with a descending Number of blocks to make each level lighter than the last. This allowed half of the bridge to be standing without the necessity of the other half Leaning on it. Sooner or later we discovered that a notable part of an Arch bridge is the fact that both halves need to balance on each other With the use of a keystone. After we discovered this fact we decided That the simplest bridge is the most efficient one with the remaining Time. Therefore we created a bridge design with the simple staircase Design. With the time on our third day we discovered a way to set up The bridge faster and we even were able to get an estimate for our Possible grade. With all of the things factored in our score would be 2.5 after normalization.

## Solution: or bridge length was 6.75 normalized By 2.75 = 2.4545455

## Lessons Learned: that good teamwork and Planning go a long way