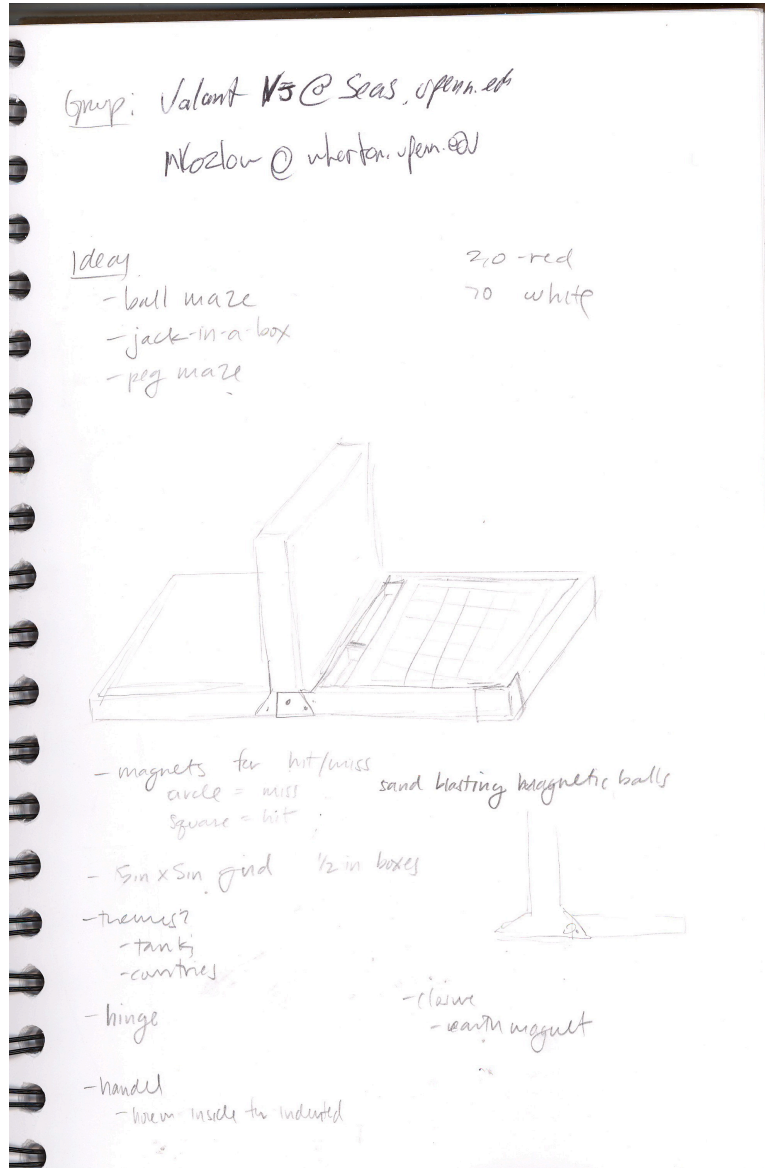


Team 2: Section 103

Mike Kozlow
Rachel Resek
Fiona Strain
Vinny Valant

March 25, 2010: The initial, less awesome, team was formed. Rachel, Mike, and Vinny began debating ideas, probably including some ridiculous ones, but after many hours, the idea was formed: A NEW Battleship, a magnetic, folding battleship.

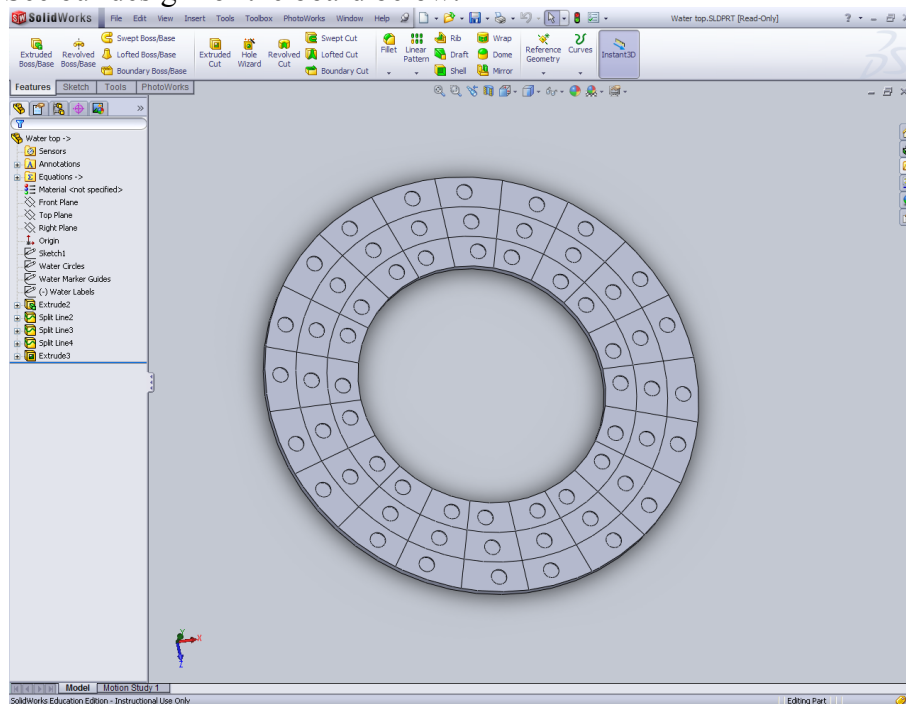


April 5, 2010: A group was broken up due to a missing classmate. Group 2 received a new group member, Fiona Strain. A larger group now, the idea had to become more revolutionary. Battleship was a stationary game, with no real risk involved. Let's make it more exciting. Let's add: movement. So, in a meeting with our 150 friend Philip Tribe, we debated different ways to make the game-board movable and how this could fit in with the rules. Once we decided on making a separate circular stationary land piece and a moving circular water piece on the outside, the ideas came together, and our design was planned. Beyond moving parts, this would be transportable and magnetic. With the sides folding up and magnetic pegs, this would be a great travel game.

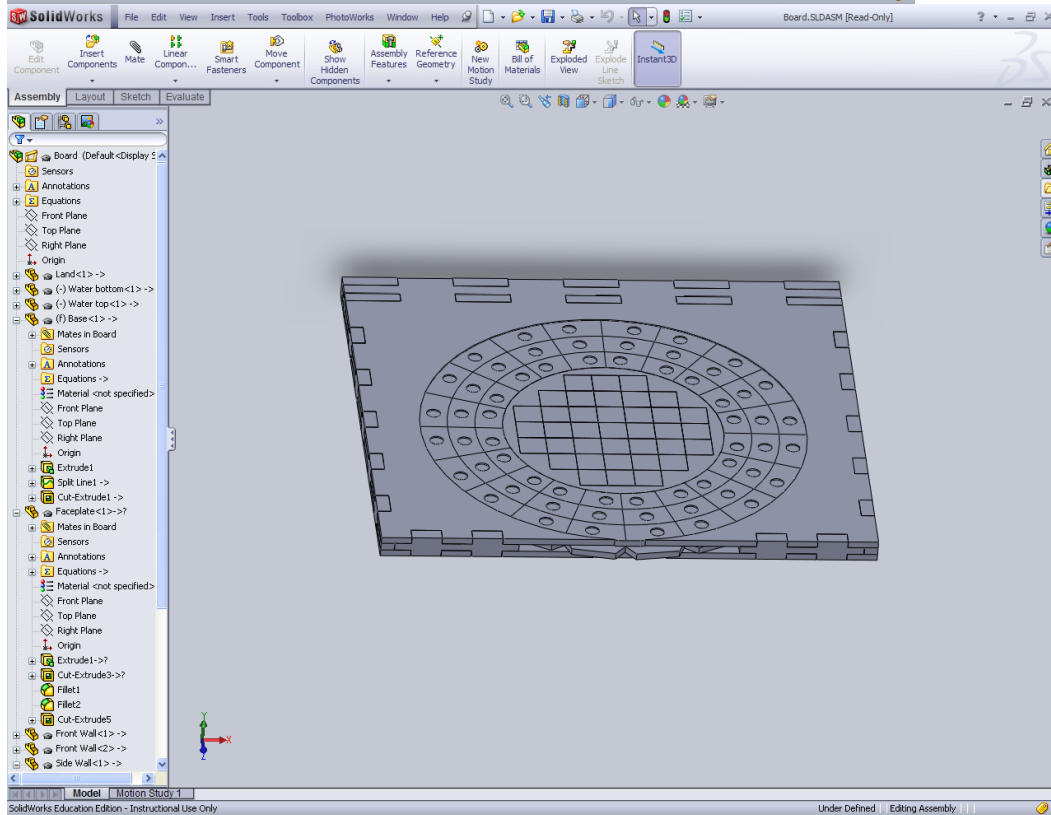
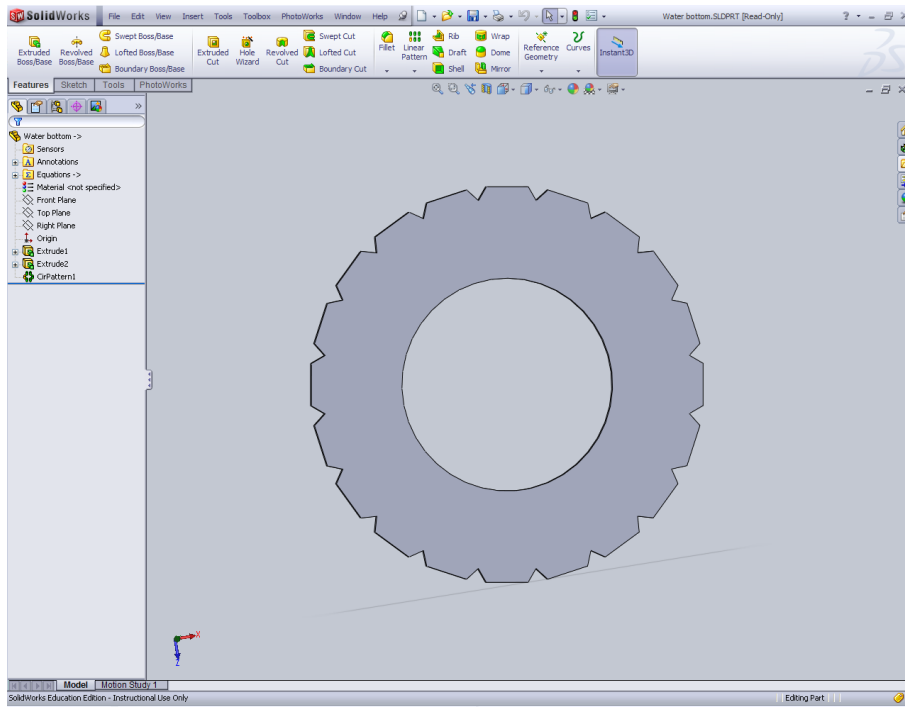
April 7, 2010: We knew what we were going to do. We divided up the Solidworks modeling and got to work. Our results included a lot of press-fit pieces that would hopefully fit together to create the base and top of the board and an interesting design of a circular board with holes spaced at varying distances to allow boats to be placed in various directions. To make the sides fold in towards the middle, we salvaged a rod, which was then cut and placed in holes in the base to allow the sides to rotate into the middle, closing the game board.

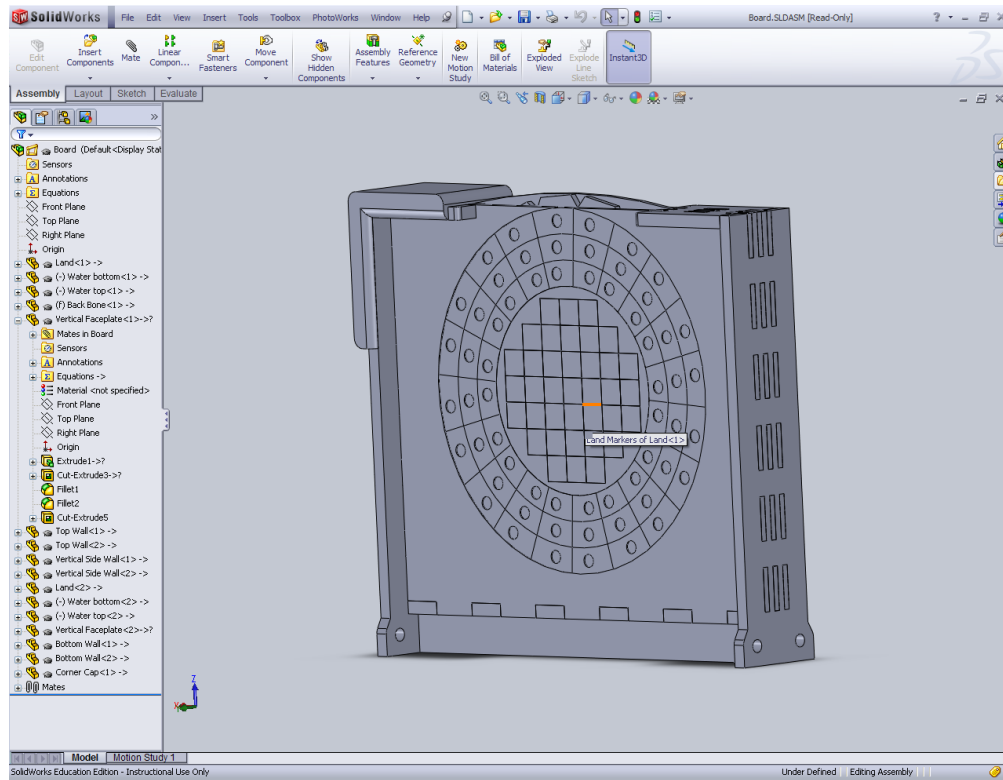
Now, how to make the water rotate around the land? We decided to glue the clear acrylic water piece to a solid circular piece with "teeth" that would protrude from the front of the base to allow the player to rotate the water.

See our design for the board below:



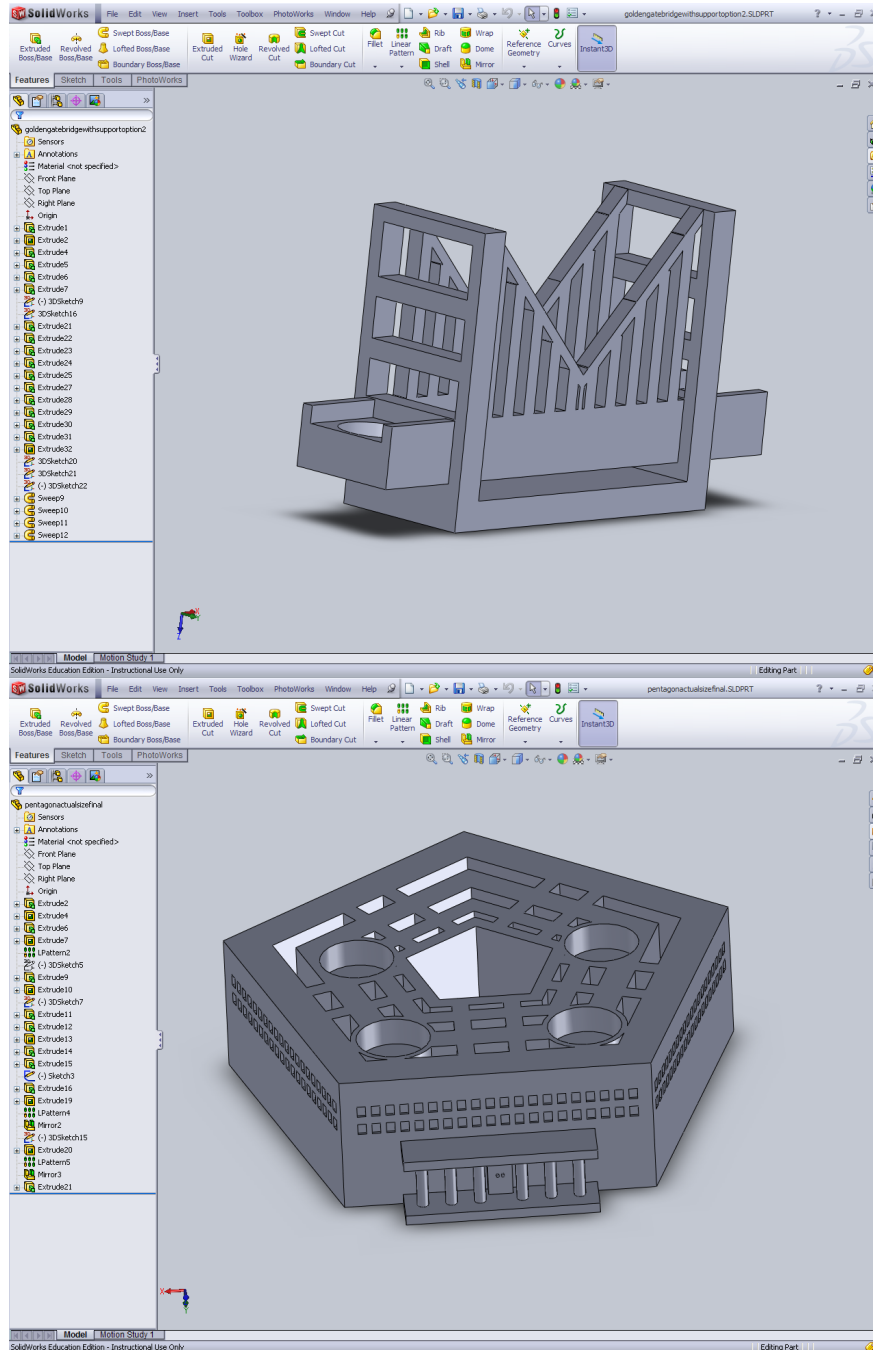
Water Piece with Holes





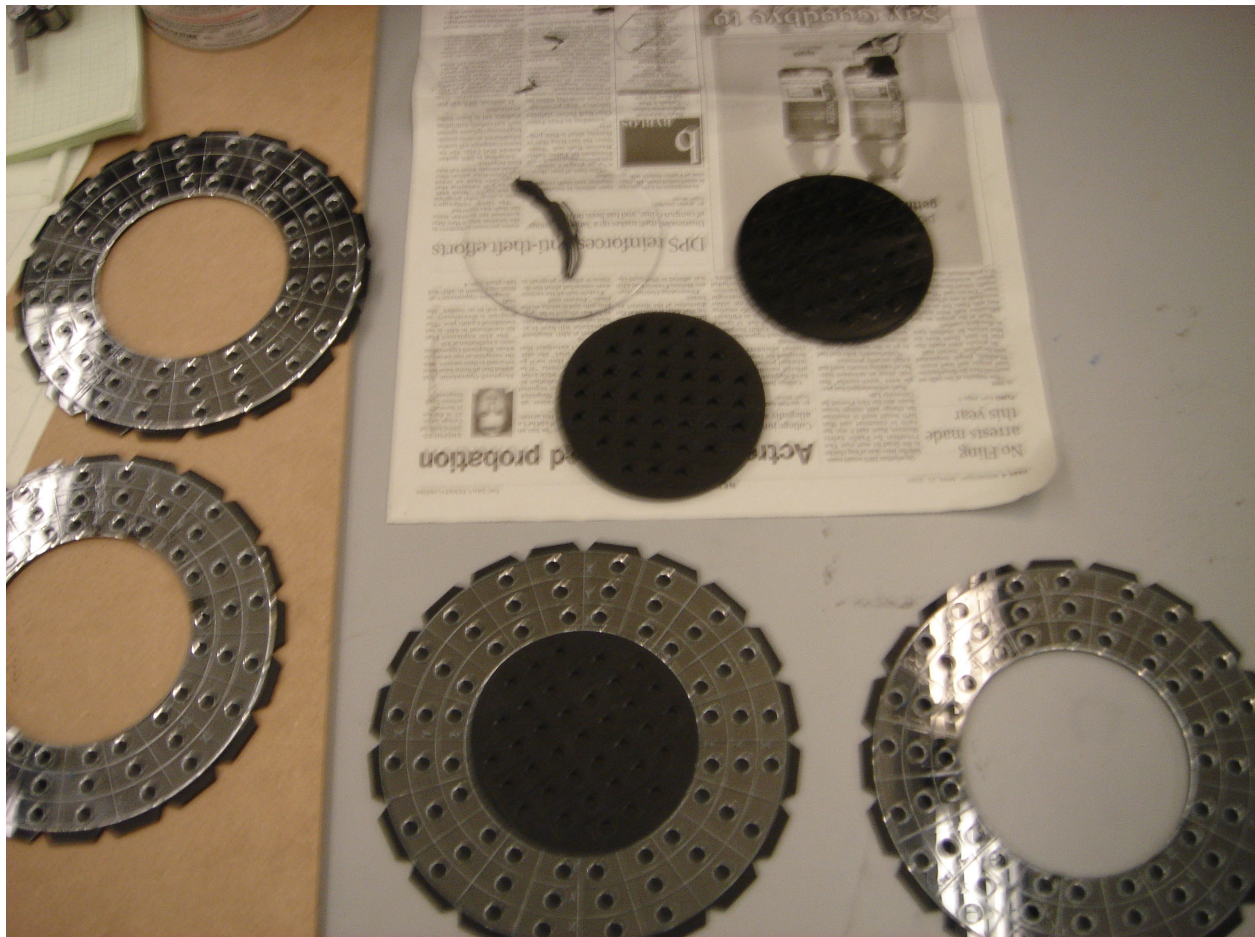
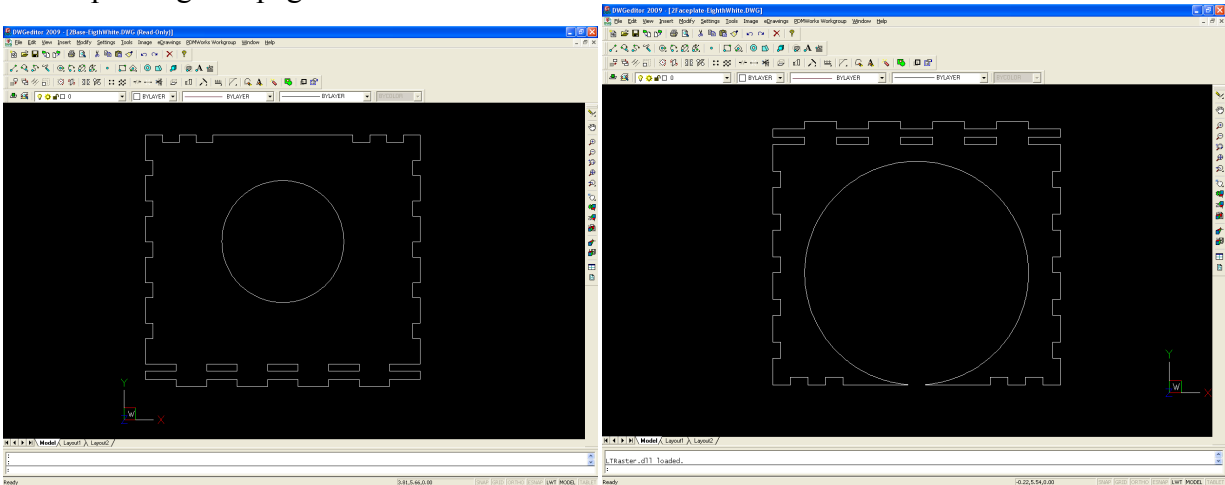
The Week of April 11, 2010: More modeling, more fun. View our wonderful creations below. Also, we had some fun with ordering supplies because we needed 300 magnets. In our revolutionary version of battleship, we had decided to make it magnetic. Basically, magnets would be glued to pegs, which would then be placed in holes that would be painted with magnetic paint, keeping the pegs in place.

Beyond the magnets, we ordered quite a supply of acrylic in blue, clear, black, and white and 1/8 inch and 1/4 inch thicknesses.



The Week of April 18, 2010: With the final touches on each part made, we began laser cutting the game-boards, base, and top. At this point, we also sent in the boats and buildings for the 3d printer, game pieces similar to those of the original battleship but much better. It's not battleship; it's World at War! We also sent in our 80 "hit" pegs.

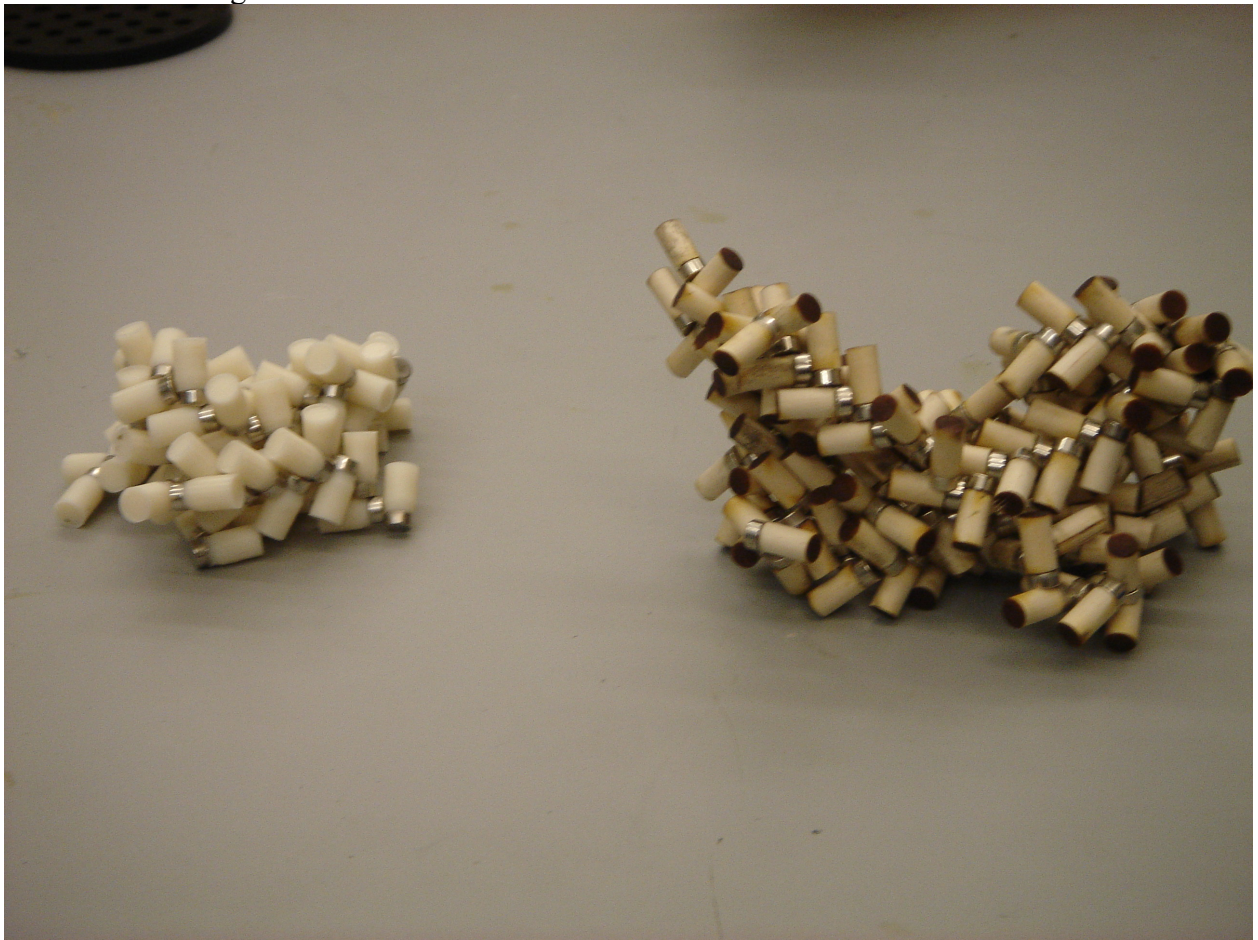
For our "miss" pegs, we cut wooden dowel rods using the laser cutter, which was much easier than 3d printing 300 pegs.



Laser Cut Game Board Pieces



Boats and Buildings



Pegs!

April 24, 2010: Let's start building!

This was a day of averting unforeseen crises. First, we realized that our pegs did not fit into the holes in the game-board. Problem. So, we hastily found more material/ordered more material and re-cut many pieces. Then, in the assembly, some of the press-fits were not actually press fitting. So, we had to sand the pegs on the sides of the acrylic pieces down. A lot.

This day was also a day of tedious work. We had to glue magnets to 300 pegs, but our magnets were actually much stronger than we anticipated. When we were gluing them, we had to keep them far apart to prevent them from jumping together. So, the table in Towne 205 ended up looking like this:





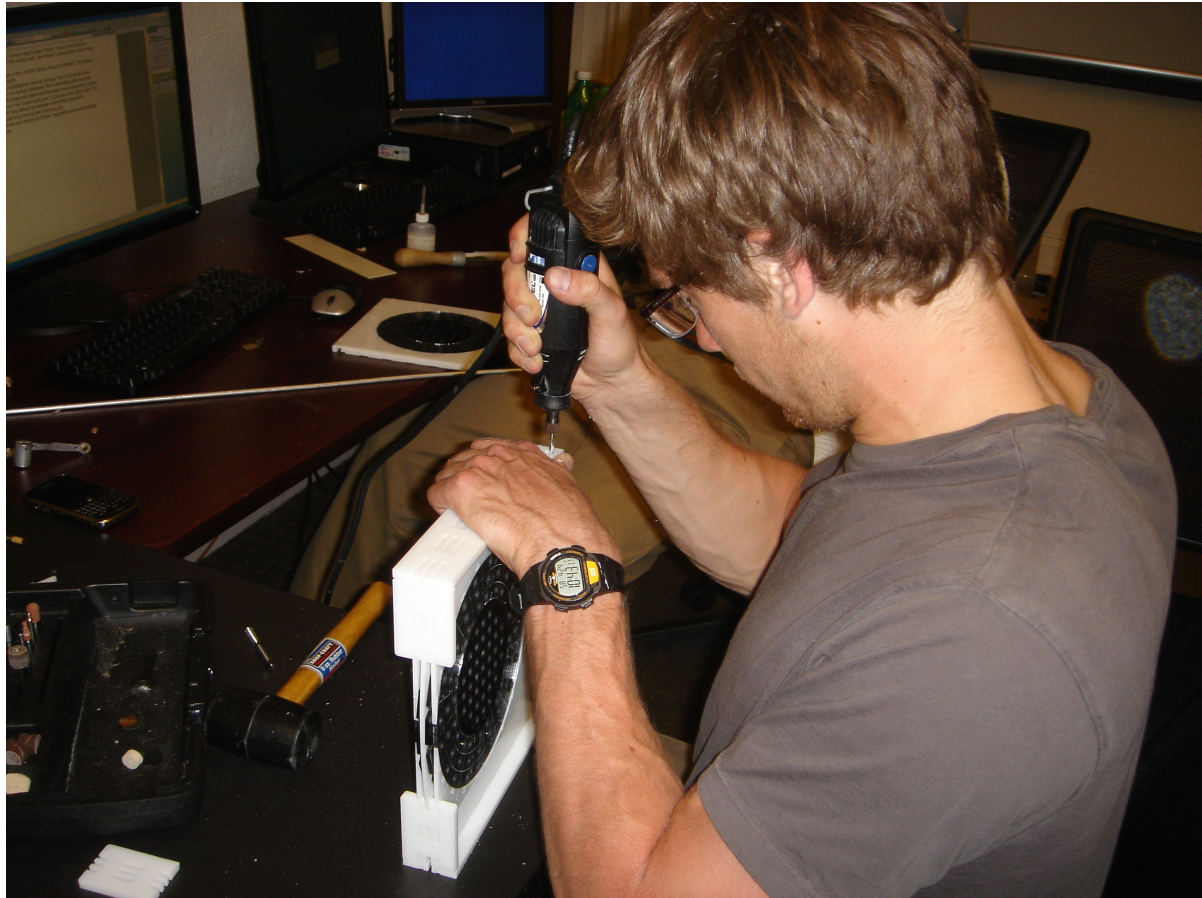
Rachel gluing magnets to pegs



Painting the holes of the game board with magnetic paint



Mike coloring the "hit" pegs red



Finally, after some milk and Chinese food, we were ready to assemble. Assembling all of it together, using a rubber mallet at times, we finally had an operating game!



The Final Product

