Choosing an object to model this project after was fairly easy for me. One of the things I miss most about high school and home is regularly playing the piano; and while I did not own a baby grand, tickling the ivories of an instrument like that is still one of my greatest joys. I find the sleek design of the instrument beautiful in and of itself, let alone the melodies it can produce.

Of course, this was a difficult model to recreate. I definitely learned early on to utilize the “mirror” and “pattern” features of SolidWorks for the keys and string patterns in the piece. However, the most difficult task was making everything fit together. It was difficult to find all the dimensions for a singular brand or piano model online (and I had no prototype to dimension when necessary.) More than once I had to recreate dimensions in order that they match dimensions of another assembly part.

I tried to recreate a model that was as realistic as possible, with different diameter strings angled in different directions and a full set of 88 piano keys. Not only is the sleek outside of my creation similar to that of a real grand piano, the complex interiors are comparable (see images below).

In many ways, this project helped me to become better familiarized with the SolidWorks program. After starting several pieces over multiple times, I began to recognize which features to include first, and which to add in an assembly rather than try to sketch on the same piece. If I were to do the project again, it would definitely take me far less time and frustration (even if I were to create a different object) simply because I am much more comfortable with the program.
Comparison to a real Steinway & Sons:

http://musicandartlifestyle.wordpress.com/2011/01/17/the-piano-history/