SolidWorks Personal Project

For my personal SolidWorks project, I decided to build a KitchenAid stand mixer. I chose this project because one of my favorite hobbies is baking and my favorite appliance to use is my KitchenAid mixer.
Assembly Parts

Bowl

Base

Top

Middle
To design this on SolidWorks I used a variety of features.

For the bowl, I used a revolved boss/base to get the main shape of the bowl and a revolved cut to hollow out the inside. For the handle I swept a rounded rectangle shape in the path of the handle.

For the base of the mixer, I extruded an ovular base and filleted. I extruded a circle for the bowl to rest on at the one end. On the other end, I lofted a shape that is similar to a rounded circle. On top of that I extruded a shape that would fit in the hollow shape of the middle support.

For the middle support, I lofted the main curved triangle shape. Then, I extruded a cut which mimicked that shape. This cut would allow for all of the parts to be assembled together.

For the top, I extruded a circle on the right plane and revolved half a sphere on either end. On the one end, I extruded a circle to represent where extra attachments could be added to the mixer. Also on that end, I extruded layered circles in the top plane to represent where beaters, dough hooks and whisks could be attached.
The most complicated part was creating the middle part. It was hard to derive the necessary dimensions. Also, it took a while for the loft of the main shape to actually work.