Soldering Iron

My SolidWorks personal project was to make a soldering iron based on a picture from the following website: [http://www.maxamps.com/Soldering-Iron.htm](http://www.maxamps.com/Soldering-Iron.htm).
I chose this particular model to, well, model because this was the type of soldering iron that I had used in high school and I wanted to make a soldering iron because I felt it would be a little challenging to make, but not so much so that I couldn’t complete it in a month. I made five different parts in order to make the product above. First, I made the blue soldering stand. I made the pentagon-like shape of the object on the top plane and then extruded that base. I made fillets around the corners and then extrude cut a square out the base. I then extruded a cylinder on top of the pentagon-like base and cut out a smaller cylinder to complete the stand. I then created a sponge by essentially making a rectangular prism. I then started to create the spiral using a helix on an altered plane. Afterwards, I used a sweep in order to make the spiral 3-D. I had a bit of trouble making a piece that would attach the spiral to the stand of the SolidWorks drawing of the spiral itself and had a make a separate part for that attachment called Spiral Part 2. Spiral Part 2
called for another sweep after extruding a cylinder base to fit inside the soldering stand. I assembled them all together and voila, it was finished. The hardest part to make in the soldering iron was the spiral because of the many different altered planes it took to make and sweep to make it all come out nicely. I learned how to make everyday objects into a 3-D or 2-D drawing on the computer and how much work it takes to come up a SolidWorks drawing for any object. I acquired skills on how to use SolidWorks as well as other programs like it, such as AutoCAD.