SolidWorks Individual Project: Compound Bow

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Images of Assembly, Individual Parts, and Drawing:
SW COMPOUND BOW
Although this is not a perfect model of a compound bow, like the one found on the title page of this document, it is a rather creative and appealing rendering of such a bow. I wanted to design and model a bow for one main reason: I wanted to impress my father and show him that I love engineering. My father and I are very avid hunters, and his favorite type of hunting is bow hunting. We all want our parents to be proud of us, and what a way it is to dazzle my mother and father with a creation of a fundamental part of our lives back home. With that, it isn’t perfect since some aspects of the build were rather difficult. The most challenging part of the project was creating the riser, which is the center, red portion. It was hard to create it with the same shape and relative dimensions of an actual bow riser. I had to use the “Sketch Picture” tool to get it to look right, then dimension it so that it would be sized to real proportions. Throughout the project, the most challenges came from learning the new features. Such features include the Circular Pattern feature which created symmetry on the bow wheel, the Flex feature to create the proper bend in the bow limbs, and the Hole Wizard along with the Toolbox, since creating precise, proper sizes for bolts was very difficult.

Overall, throughout the course of the past two month I have went from a student who has never used a computer drafting program in his life to an engineering student who now knows how to generate endless designs in SolidWorks. In the beginning, the tutorials helped me understand what the features did, but I have progressed passed that. Now, I am advanced and clever enough to use Reference Geometry, Smart Dimensioning, and especially Sketch Relations to my advantage to make beautiful, professional products rather than mediocre, inadequate parts. Lastly, I would like to mention that I used the image on the title page from PSE Archery, which is cited below. Also, I sketched my riser from the image below, which also cited below.
Work Cited:
