SOLIDWORKS DESIGN TO PRODUCT: Fidget Spinners & Mini Cars.

Junior and Senior students are uncovering the benefits of SolidWorks For Engineering, a program that allows three dimensional drawings of normally a two dimensional one. This program works with OnShape, DraftSight, and other AutoCad like programs but adds some "kick to the dip". It also easily allows designers to become builders, manufacturers, or fabricators more easily.

This program will allow students to see the fabrication process of their designs with something as simple as a fidget spinner to something more advanced as a mini car design.

Fidget Spinners:

Fidget spinners come in all kind of shapes. Now is your turn to try your hand at designing one. Use the rubric to check your requirements.

Instructions:

1. Use SolidWorks to create a fully defined sketch of a fidget spinner of your own design.
2. Make sure the spinner will fit your hand.
3. Leave a hole in the middle of the spinner with a .865 DIA for the bearing.
4. Extrude the spinner to a ¼" depth.
5. Submit the SolidWorks file to the assignment in Canvas.
6. Assemble the 3-D print and bearing once print is complete.

Car Design:

Now let's move up to something a little more difficult and relevant to life.

Instructions:

1. Decide what type of vehicle you want to draw.
2. Use SolidWork/OnShape create 3 parts that are fully defined and 3-D modeled (body, axel, and wheel).
3. The body should be able to fit in an 8" x 8" box.
4. As you decide on dimensions, make sure you create and allowance fit between the axel, and the body and the axel and the wheel.
5. Once the parts are 3-D printed, assemble your car. The axels should be able to slide into place and spin. The wheels should fit on the axels and be glued in place.
6. The final product should be able to be put together and roll as a toy car would.