

The tool I chose is a 3D printed coaster from Thingiverse because I frequently carry mugs and canteens to my room or to class, but due to unsteady hands, I often spill my drink. The tea ends up leaving stains on my table.

After printing it, I was skeptical of its practicality or usefulness because of the thickness, holes in the design, and small diameter. My insulated Klean Kanteen barely fit on the coaster.

However, it is actually a nice tool to have around. I brought the tool with me while visiting different people and instead of having to ask for a napkin or paper towel to set my canteen down on, I had my own coaster. The coaster keeps the drops of tea off of the table if it hasn't spilled too much. It's also very fascinating to most of my friends, which I think was the most exciting part of actually having the coaster.

At home, I've been mostly using it for the green mug (shown in documented photos) because it is a perfect fit. The rough surface of the coaster and bottom of the mug keeps the mug from sliding much better than leaving it on the table. I've also had to wipe stains off of my table less. It helps that I am not precious with the coaster which I would have been if it had been made out of wood. The original problem I had wasn't that I didn't have coasters, but that I kept buying nice ones which I was then completely reluctant to use.

To better suit my needs, I would probably print a range of sizes for the coasters since they are a bit too small for most of my mugs. I would also have the holes of the gears be a pattern so that the beverage can't drip through the coaster. Creating a raised ring on the coaster would help keep spilled liquid from getting onto the table.