

Skittles color-sorting used as challenge for maker's 3D printer (w/ Video)

September 11 2015, by Nancy Owano



A 3D-printed Skittles sorting machine that can sort the colors into bins is

the product of an inventive person who wanted to see what his new 3D printing machine could accomplish. Nathan Peterson turned to *Hackaday* to share his success story with the rest of the candy color-sorting maker world.

He designed this [sorting machine](#), powered by DC motors, using Tinkercad, which is an online app to [create](#) and print 3D models. "Everything is 3D printed except for the electronics," he said.

A TCS3200 helps to do the color sensing; the machine uses an Arduino Uno with a ZITRADES Color Sensor Module (w/ TCS3200) to identify each color. The machine was given additional [sensors](#) to detect positions of the discs and to tell when a Skittle has been [dropped](#). The DC motors, he said, came from a robotics kit that he bought at RadioShack.

His project page on *Hackaday* lists the machine components.

An article about the machine in *3DPrint.com* noted that to make sure the machine is running in an environment with enough light to make the correct color determination (reds from oranges, for example), it has a LED.

After the color reading of each Skittle is complete, the pieces are sorted with a series of gears, each into a tray with only like-colored mates, said *3DPrint.com*.

Will the machine work with Skittles only, or it can it work with M&Ms?

In theory, one would assume it works with M&M's but Skittles have less [colors](#).

The Peterson motivator in the first instance was to try out his newly acquired 3D printer. He looked for a project with some challenge, which

could involve both mechanical design and image recognition. Peterson talked about this in the *Hackaday* post:

"I started working on this project because I thought it would be a fun project as it has some unique challenges, and it gave me the chance to make heavy use of my newly acquired 3d printer. I wanted to build a compact machine that would sort skittles accurately and quickly. I thought of the idea to use rotating discs to move the skittles to separate bins because it allowed me to make a more compact design."

By the way, he added, he is aware that some Skittles do NOT get sorted into the bins. This is not by accident. "Those are calibration skittles that are used to calibrate the sensor every time it starts up. You can actually sort different flavors of skittles by replacing the calibration skittles with whatever flavor you want to sort," he said.

[Peterson](#) is identified on Twitter as maker, engineer, juggler, and iOS developer, in that order.

A number of tech sites appeared to appreciate his efforts, including *TechCrunch*: "This Is The Automatic Skittles [Sorter](#) Apple Should Have Launched," said the headline for article by in its East Coast Editor, John Biggs.

Hannah Rose Mendoza said in *3DPrint.com*: "If only grandmother were alive to see this, it would put to rest a question she asked me many times when I was a child: Why can we put a man on the moon, but we can't make a machine using advanced additive manufacturing techniques that will allow me to free myself from the burden of individually determining [candy](#)-coated coloring in order to appropriately compartmentalize my sweets?"

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