

# Matching Colors

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## Abstract

My 3D project is a tool used to teach children their colors, the goal is to put colored cylindrical pieces in their correct places based on the colored LEDs that will be on the product. The lights will be blinking all at the same time next to their intended hole. In order to get these cylindrical pieces out, there will be a hatch that releases these back onto whatever surface is beneath it, once these pieces are released you can then repeat practicing your colors!

## Introduction

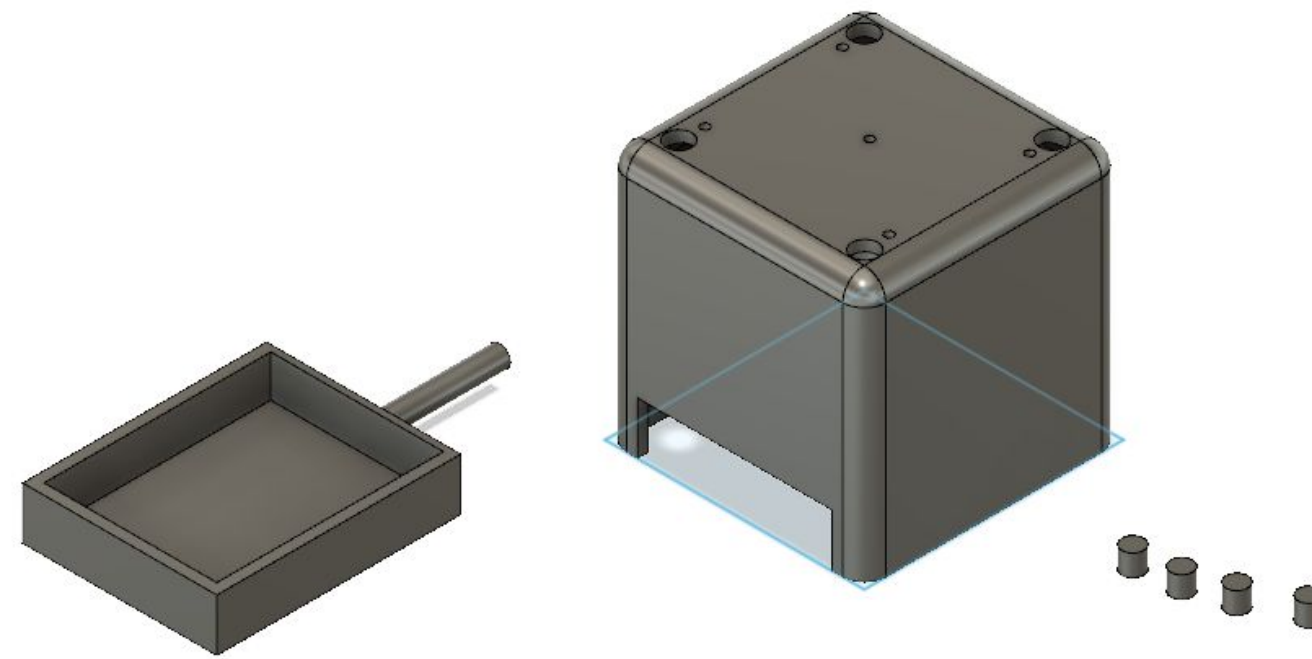
According to studies, toys with contrasting colors help children develop cognitive abilities and depending on the toys it also helps in the development in motor skills as well as hand eye coordination. This toy aims to work on all of these abilities while also presenting a fun way to interact with toys.

## Methods and Materials

Materials used for this project were fusion 360, 3D printing, wires, and LEDs. the shape of the project was all sketched and made from scratch, it was not derived from anything.

## Results

While printing this design there were many trials and errors that came with the project, as you can see the leftmost design was a simple hockey puck like figure with holes going through it. The end goal was to have a hollow middle so that the pieces would fall into the section so that the pieces can be reused for the game. The rightmost picture is the end result of my project, as you can see i explored many different types of shapes and ways to make my idea work, in the end i figured out that i can make the figure hollow with a drawer at the bottom so it catches the pieces, and when all the pieces are inserted they can be dumped back out. A problem with this print was that there was never an easily accessible way to insert wires intended for the LEDs. Overall the toy works and the project was a success.



## Contact

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