

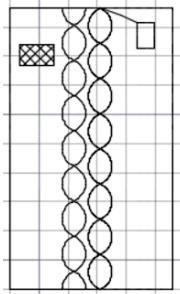
# 3D Filament Recycling

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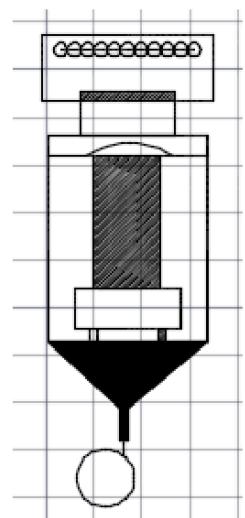
## Abstract:

The design that we have made is a device that has the capability to recycle 3D printer waste into usable filament. Our design is broken into two major steps. The first step is to compress the plastic materials. The method that we have chosen is to have a shredding device that will break down the plastic material and allow it to fit easily into the heating mechanism. The shredding device will turn the plastic material into shreds and allow it to pass into the heating mechanism. The second part is the heating mechanism. The object will fall to hot plate encased by a box, and will be heated to extrusion temperature of 275 degrees using the hot plates capabilities. Once the object is heated, it will be fed into the extrusion device to the correct measurement so that it can fit the printer.

Shredder



Design



Heating Device

