COLORADO STATE UNIVERSITY

Recycled Filament Initiative

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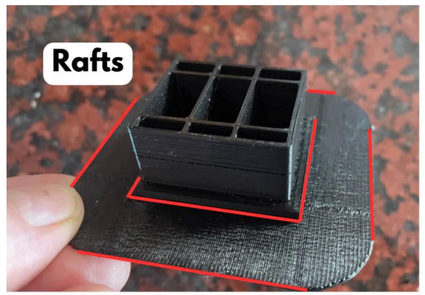


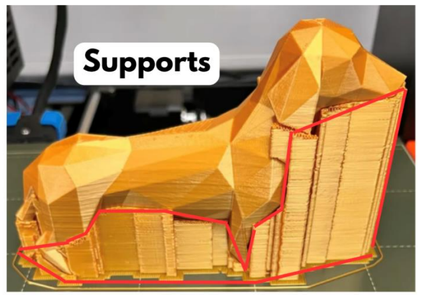
Introduction

- Previous experience with 3D printing.
- Plastic waste from 3D printing is NOT accepted by curbside recycling facilities.
- Inspired by emerging technologies & passion for sustainability.

18,500 Tons of plastic from 3D printers in 2020 (NIH, 2021).

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7957743/











Recycled filament in action

- **Purchased** innovative recycling machines from Felfil (x2).
- **Installed & tested** the machines in two 3-D print labs.
- Wrote **resources & tutorials** for students & faculty.
- **Spread the word** to students, faculty, and clubs.



Integrated System at the I2P Lab







Results and Follow Ups

1. Fostered **connections** between the two labs & staff.
2. **Outreach activities**: I2P (11), SASE (6), SWE (60), MECH202 (79), online outreach: RWB & oSTEM.
3. Encouraged curiosity & asking questions!



Future Plans

- Comprehensive staff training.
- CSU News - SOURCE.
- Include the Richardson Design Center.

150+ Art students
307+ Engineering students
access per semester

165 pounds of filament saved/semester

