Hole in One Plastics

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Project Summary

The amount of waste filled into the world's ecosystems has become an increasing problems in recent years. Golf courses, specifically, are filled with broken tees that are left to decompose in the environment. Golf course sustainability and the amount of plastics filling landfills are the root problems faced in the project.

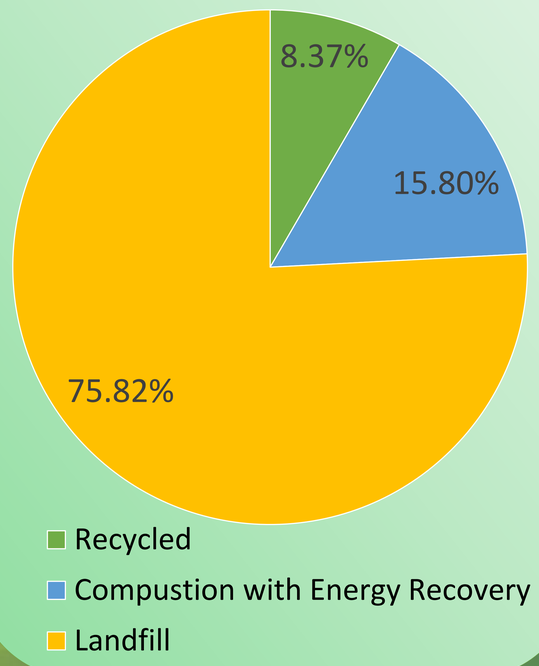
Abusing Plastics

Thermoplastics, such as High-Density Polyethylene (HDPE), are commonly used for creating bottles to store liquids such as milk and shampoo. However, the common use of HDPE and thermoplastics has resulted in the mass disposal of these materials. This act of mismanagement has led to overfilling landfills. The issue is highlighted by the high concentration of HDPE in landfill leachate, the liquid residue that leaks from landfills. A study conducted by the Water Research Journal recorded that an average of approximately 35% of the leachate in 12 samples contained polyethylene[2].

Process

- Use recycled plastics
- Turn plastics into pellets
- Use an injection mold to make the tees

Plastics in 2017[3]



Saves 70,000 trees yearly in the United States

Reduces emissions caused by the production of tees

Limits the amount of plastics entering landfills

Solution

Create a dual material golf tee using a High-Density Polyethylene (HDPE) body with a steel tip to allow for easy recyclability and cleanup due to its magnetic properties.

Business Model

[1] Simple Ecology. "Tiny Golf Tees Can Send a Big Message." *Simple Ecology*, Simple Ecology, 16 July 2009, www.simpleecology.com/eco/golf-tees.
[2] He, Pinjing, et al. "Municipal Solid Waste (MSW) Landfill: A Source of Microplastics? -Evidence of Microplastics in Landfill Leachate." *Water Research*, Pergamon, 2 May 2019, reader.elsevier.com/reader/sd/pii
[3] "Plastics: Material-Specific Data." *EPA*, Environmental Protection Agency, 30 Oct. 2019, www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data.