CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)

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Project Number

J1114

Project Title

Help Save the Planet: Sort Trash Right at the Source

Abstract

Objectives/Goals

Our project objective was to develop trash sorting habits in kids, inspire kids to contribute and help save the Planet. Waste, when properly sorted, will optimize recycling, reduce the waste sent to landfill, and protect the environment

The story of the city Curitiba, Brazil inspired us to do this project that would help reduce the amount of landfill. An iOS app was created where users could search for any item before disposing it if the item was Compostable, Recyclable or Landfill. Using this, waste was sorted into the right bin at the source. Effective recycling is based on effective waste sorting at its source. Waste sorting done correctly today will motivate future generations to learn and influence the environment positively.

Methods/Materials

Materials Used: MacBookPro, Swift 3.0 (App programming software), Trash-can, 3 garbage bags, hot glue gunn, cardboard, xacto knife, markers

Method: Using iOS Xcode and Swift programming language, an app named "SmartCan" was created. This app had scrollable list of items was created where each item has a title, image and waste category. When user searched for an item, details of that item were displayed defining if it is to be disposed as Compost, Recycle and Landfill. A survey was conducted on how waste was sorted into Compost, Recycle and Landfill with and without the app.

Results

A survey of usage of SmartCan app showed 100% improvement in sorting waste items. Without the app, most people scored between 50-70% wrong in waste sorting while they were all correct using SmartCan app.

Conclusions/Discussion

Proper disposal of waste can lead to a better environment and prevent future damage to renewable sources. Our app teaches kids how important it is to dispose trash properly, so it an empower them to make a difference on the environment. Waste sorting decisions taught to kids today can make a positive impact on the future eco system.

Summary Statement

Train kids to properly recycle and compost that will reduce landfill and save the planet for future generations.

Help Received

I got help in understanding the programming language, programmed the app myself after an internet search. My parent reviewed my programming.