

Team Name & School: Bioware Solutions; Tucker High School

Member Names: Jayden Claybrooks, Kalkedan Hailemariam, Mia Huhtanen, Dhyana Patel, Riley Robinson, Zaryn Williams

Teacher Name: Nicole Chapman, Takeshia Head

Green Heart Action Plan

Problem Definition/ Problem Statement

Tucker High School is contributing to habitat loss and the build-up of non-biodegradable waste, endangering the Earth. Traditional styrofoam school lunch trays and plastic utensils contribute to land pollution. Numerous students use and dispose of these materials every day, which involves multiple single-use plastic materials including the styrofoam trays and plastic utensils. This waste accumulates, adding to the multitude of imperishable waste harming the Earth.

Root Cause of the Problem

The standardness and familiarity of traditional resources, the ease and affordability of purchasing typical materials, and the relative unfamiliarity of alternatives contribute to the continued implementation of single-use, non-biodegradable materials in many school cafeterias. The repetitive utilization of environmentally harmful materials endangers ecosystems, threatening the survival of living organisms and restricting the natural decomposition of biodegradable substances.

List at Least Three Credible Resources that Support Your Problem Statement

Benefits Considerations Reusable Trays Reduce Harmful Environmental. (n.d.). Retrieved from <https://thegreenteam.org/wp-content/uploads/2022/07/GREEN-TEAM-Cafeteria-Tray-Options.pdf>

Ditching disposables: A School District's journey to reducing waste: Nutrition policy institute. (2025). Retrieved from <https://ucanr.edu/program/nutrition-policy-institute/article/ditching-disposables-school-districts-journey-reducing>

For Healthier, Greener School lunches we should cut plastic waste. (2024). Retrieved from <https://environmentamerica.org/articles/for-healthier-greener-school-lunches-we-should-cut-plastic->



waste/

Guides #46: Tableware & Trays. (n.d.). Retrieved from

<https://www.greenschoolsalliance.org/guides-46-tableware-and-trays>

Singh, M. (2015). Schools Say Ciao To Plastic Lunch Trays, Hello To Compostable Plates.

Retrieved from

<https://www.npr.org/sections/thesalt/2015/06/06/411986584/schools-say-ciao-to-plastic-lunch-trays-hello-to-compostable-plates>

Proposed Solution

Our solution is to work with our school administrators and/or school district board to replace the plastic utensils and styrofoam trays with biodegradable equivalents. We would use a reliable source for the replacement materials and set up the purchases so that the effect would be long-lasting. We hope to work with the Green Heart challenge winners from last year and school officials to separate our cafeteria waste bins into traditional landfill trash and compost/biodegradable waste that would be taken outside daily. The compost soil could be used in our school or community garden.

How We Will Measure Our Success

To measure our initiative's success we will keep a weekly log monitoring the quantity of compost compared to trash, the compost pile temperature, and other observations of the compost structure.

Who are Decision Makers We Need to Reach

We need to reach the Dekalb County School Board, our school's principal, our school's cafeteria staff, our school's custodial staff, and a compostable material producer like Good Start Packaging.

Our 3-5 Step Plan for Change

1. Get our principal and staff on board for the switch.
2. Work with our principal and county staff to replace purchases for current cafeteria materials and with purchases from Good Start Packaging (or an alternative company) for the new materials.
3. Work with the Green Heart Challenge winners from last year to create a partnership regarding the compost bins and the garden.
4. Purchase new bins for compost.



5. Measure and maintain our initiative's success and student compliance.

Impact & Equity

This project will reduce waste production in our community by creating beneficial compost and reducing the addition of trash in landfills. Our solution transforms waste into nutrient-rich soil for our community garden creating environmentally sustainable practices at Tucker High School. The solution would reduce our school's environmental impact and encourage more environmentally friendly practices in our community.

What Help We Need to Be Successful

To be successful, we need the cooperation and support of school and county officials with our proposed change. We may need funding because compostable materials can be more expensive to purchase, especially on a large scale. We might need help financing the switch until we can get settled with the plan within our school and county. We need support from the students, staff, and community so that our project can have a meaningful and lasting impact. The school population has to be on board with separating compost and traditional landfill waste on a daily basis. Finally, we need a company that produces alternative dining materials for our school to work with, like Good Start Packaging, who has confirmed interest in our cause.

