

COMPOSTING IN BIOREACTORS

9th-12th Grade Culinary 1, Sarah Gof

10th-12th Grade Chemistry, Debra Hacker

ST HELENA HIGH SCHOOL

For this project students were asked to build small bioreactors to illustrate the cycle of food compost. Culinary students brought their knowledge of foodborne bacteria, cross contamination, workplace safety and protocols to maintain a safe working environment. Chemistry students brought their knowledge of scientific theory and testing, variable control, and intrigue. Together, students developed and tested a hypothesis to determine the best way to make compost from our student generated food scraps on our campus. Students also visited composting and landfill operations for inspiration and a chance to speak with the experts.

Teacher Reflection

This was the first project that the students collaborated on this year. In the beginning it was a little underdeveloped and our project management was still under construction. However, the students took to the project with enthusiasm and early difficulties were overcome. We learned that this project should have been allowed more time for data collection, and that composting in the classroom is stinky! Next year we will move the composters to the greenhouse in efforts to reduce the smell in the classroom and speed up decomposition rates with heat.

Student Reflections

This project helped to solidify the concepts we learned in culinary about contaminations and spreading bacteria. It was fun meeting people from the other class and I liked meeting the chemistry teacher and it helped me see her class as a more attainable goal.

— Kallie, 9th Grade Culinary 1

The project was very fun, except for the smell of the composting material. The project was awesome. I learned a lot how chemistry is all around us and I think it was a good way to learn about reactions and decomposition.

— Carson, 10th Grade Chemistry

