

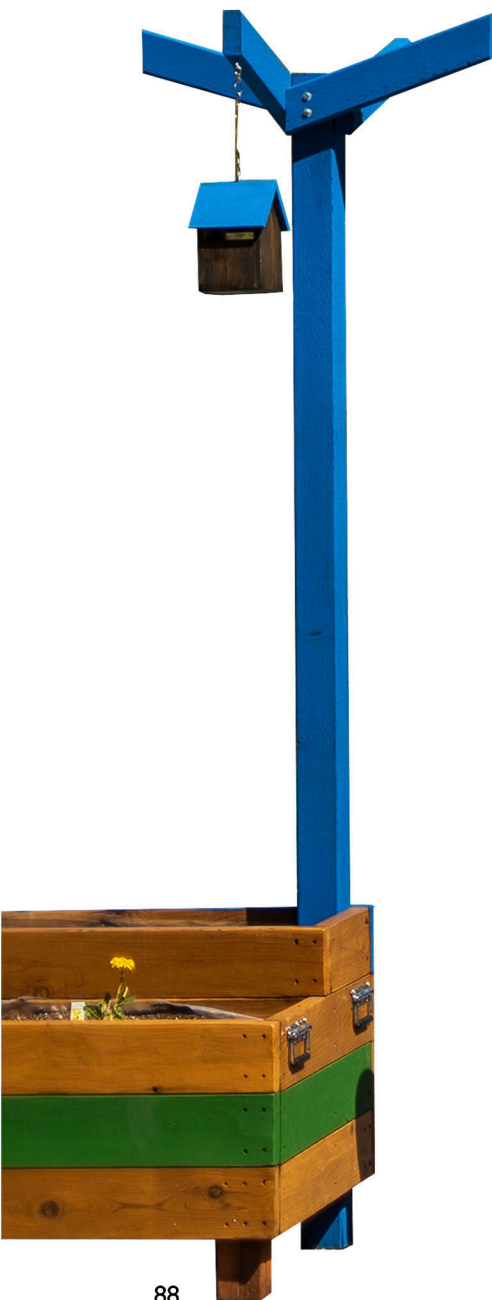
“A real client makes all the difference.”

Pat Holder and John Santos teach humanities and environmental science, respectively, and they are also both woodworkers and passionate about teaching students to design and build. They were planning to collaborate on a project about nutrition, agriculture, and food access when the director of a sister elementary school approached them. The elementary school had a large blacktop play yard and needed a way to create a separate area for kindergarteners. With an authentic need and a real client, Planting Community took shape.

During morning academic classes, students read about and researched issues related to agriculture and food production. They looked at food choices; what adults and kids choose to eat; how those products are farmed or produced; and what the impact of those choices are on humans and on the environment.

In John's class, students learned about plant biology, environmental systems, and disruptions to those systems. Students wrote three rounds of research articles, choosing their own topic for each round. The first round focussed on broad, global environmental issues (this was to get them better at research and writing), and the second article looked at environmental issues related to feeding the global community. The final round (once they had improved in research and writing) was to write an article specific to the environmental issues and impacts of feeding the San Diego community, including interviewing an expert.

To dive even deeper, students chose a specific food product and traced all of its impact, from nutrition to packaging, to how it is produced, to the impact on the environment and the workers in that sector. They wrote articles, conducted interviews with experts, and created a poster with their findings.



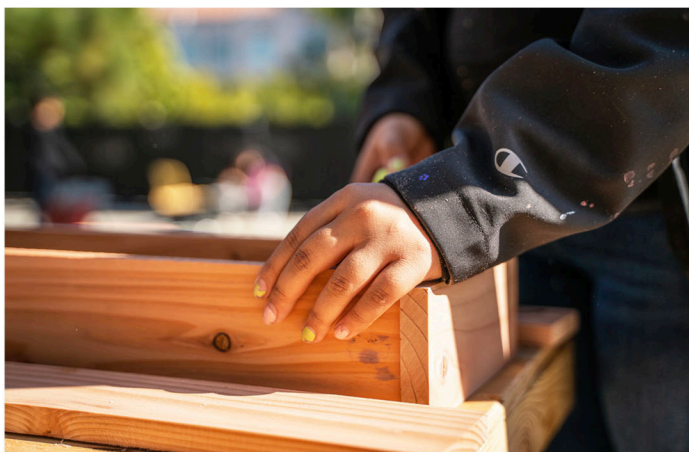
PLANTING COMMUNITY

HUMANITIES • ENVIRONMENTAL SCIENCE
ELEVENTH GRADE
PAT HOLDER • JOHN SANTOS • HIGH TECH HIGH



In parallel, students were also engaged in designing and building. John and Pat wanted to scaffold the design/build process so that students could learn to use the tools and materials before they engaged in the high stakes products for a real client. First they built small planters as a mini-project. Next they did a "marketplace build;" a product of their choice that had something to do with food or agriculture. These were sold at an exhibition to raise funds for the final elementary school installation.

Meanwhile, students were meeting with the kindergarten teachers and children to understand their needs and desires. They went through iterative stages of creating models and getting client feedback. Finally, they were ready to build. Students worked in groups to create large mobile planters for the kindergartens that featured seating, storage, learning spaces, manipulatives, bird houses, and gardens.





LEARNING GOALS

- To understand the impact of food choices and the food industry on humans and the environment
- To understand plant biology, biodiversity, environmental systems, and how disruptions to systems cause environmental issues
- To develop a stronger ability to research and synthesize information from external published sources, and to interview experts effectively
- To develop planning, collaboration, and communication skills
- To strengthen revision/critique skills and develop an ethic of excellence
- To understand the complexities of the design process when working with the constraints of a real client's needs, financial limitations, and material constraints
- To strengthen choice and ownership. (This goal often goes unspoken, but is very important to John and Pat—each cycle of the project challenged students to find topics they were interested in, choose a group to participate in, and voice their opinion in design choices.)

EXHIBITION AND ASSESSMENT

A first exhibition featured a market of smaller food-related products and raised funds for the final planters. The final exhibition featured the planters and the food product research essays and posters. The true proof of concept occurred when the planters were installed in the elementary school playground, filled with plants, and tested by kindergarteners.

John and Pat continuously checked in with students about their progress, and the various products they were creating. They also created multiple opportunities for critique throughout the project—on built products, designs, writing, and presentations. Students' grades derived from an assessment of participation, process (time management, collaboration, planning), and product.

