

Project Name: Sustainable Making Workshop Series:
Team members: Colleen Jordan

Project Description

The Sustainable Making Series is a series of two workshops at TechLab, Emory's on-campus makerspace, that will introduce students to new ways of thinking about sustainability and give them hands-on opportunities to create projects made with sustainable design principles that they can use in their every-day lives. Students will also get an introduction to tools that they can use in their academic and personal work at TechLab. This is meant to kick-off the first installation of this series with a solar powered phone charger workshop in the spring semester.

For this workshop, we will venture into the world of sustainable energy and create solar-powered phone chargers. Workshop participants will learn about how solar charging works and how to design projects for easy repair and upgrade. In this workshop all participants (up to 20) will make their own 6V photovoltaic phone charger, and learn how to use TechLab's resources to build and repair their own projects.

Objective

The sustainable workshop series is meant to be a new workshop series at TechLab highlighting sustainable making technologies and techniques. Emphasis is put on using sustainable and renewable materials, repurposing items to save them from the landfill, and building projects that are user repairable and upgradeable.

The solar powered charger workshop is the first installment of this planned series. The objective of this project is to teach participants how to build and repair a solar-powered phone charger and to introduce them to TechLab, Emory's on-campus makerspace. Using photovoltaic solar cells to power and charge electronic devices is a sustainable and renewable source of power that can reduce dependence on non-renewable sources of energy.

Holding this workshop allows participants access to this sustainable renewable energy source. It also empowers them to be able to repair, modify, or upgrade their charger, reducing the amount of waste generated by typical phone chargers.

Financials

Award Amount: \$ 1135.30
Amount Spent: Adafruit: \$998.66
 Amazon: \$136.42

Results and Lessons Learned

Through planning and executing this series of workshops I learned several lessons. During planning, I realized that the limitations of our space and resources in TechLab would limit the number of participants able to attend each workshop. We originally planned to host one session with 20 participants. In the planning process we realized it was more feasible to host four workshops with five participants each instead due to the fixed amount of equipment needed to host the workshop (soldering irons and

ventilation) and to allow more time for participants to get one on one help. Many of the participants were complete beginners to electronics projects and needed more one-on-one assistance than expected. We were still able to complete the project in the planned two-hour workshop period, and hosting smaller groups allowed us to give the participants the one on one help that they needed. For future workshops we will consider these needs and limitations.

Another issue we encountered was difficulties in how participants responded to their planned attendance to the event. We announced our workshops on the Hub and on Emory's calendar through Trumba. Our first two workshops were smaller than planned due to several participants not showing up and updating their response, which excluded people from the waitlist from attending. Our third workshop was larger than expected because several participants from the waitlist showed up without a confirmed slot. In the future we can send reminder messages about the event to participants in the days or week before to remind them of the event and to change their response as needed.

Throughout the workshop series, we were able to help seventeen participants build their own working solar- powered phone charger over four workshops.

Workshop attendance:

Session 1 (March 27):	3
Session 2 (April 1):	3
Session 3 (April 22):	7
Session 4 (April 30):	4
Total:	17

Materials Produced

Please see this [OneDrive folder](#) for all photographs taken during the workshop.