



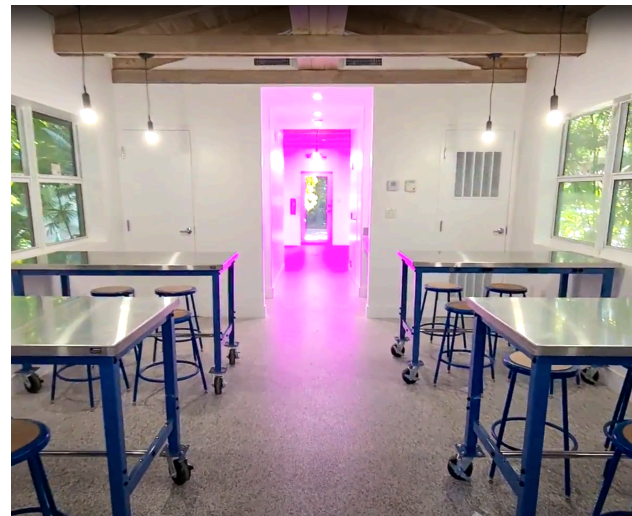
Growing Beyond Earth Innovation Studio

Fairchild Tropical Botanic Garden, Coral Gables, FL
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Award 80NSSC18K1225

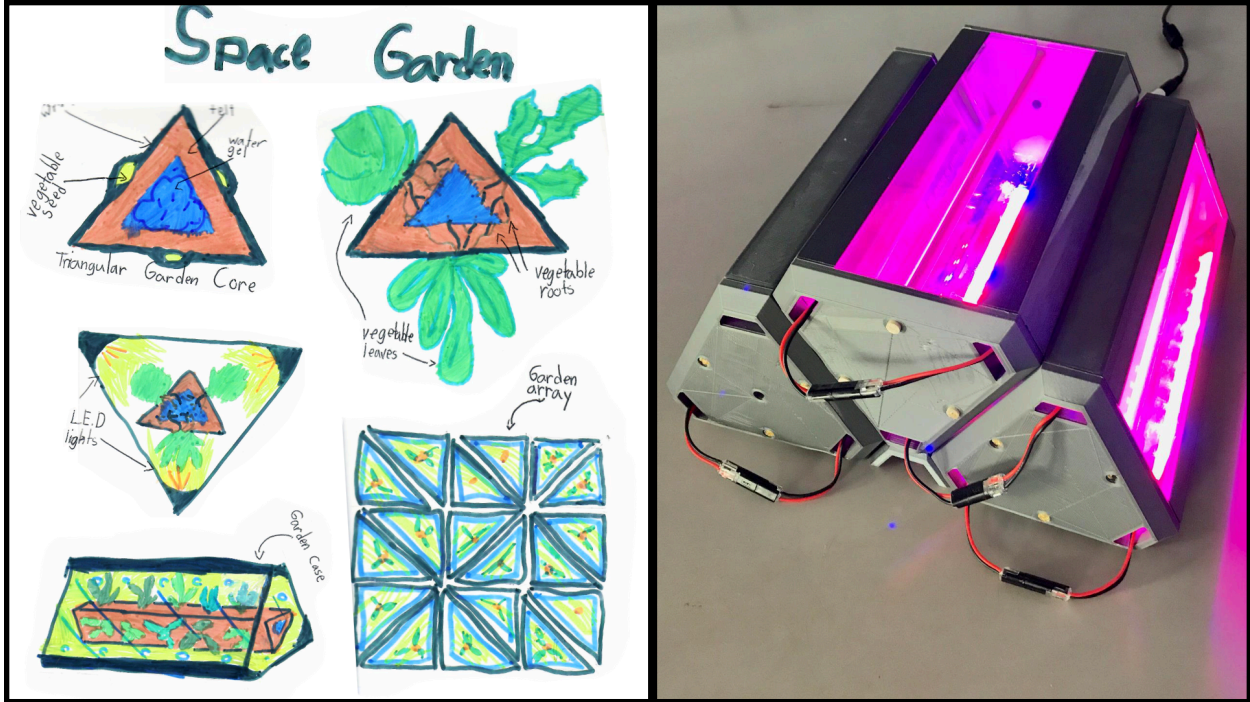
Fairchild is working with NASA Kennedy Space Center and soliciting ideas from makers nationwide for new food production technology. The *Growing Beyond Earth Innovation Studio*, the first maker space in a botanic garden, is facilitating the development of new hardware for growing plants in space.

Project elements:

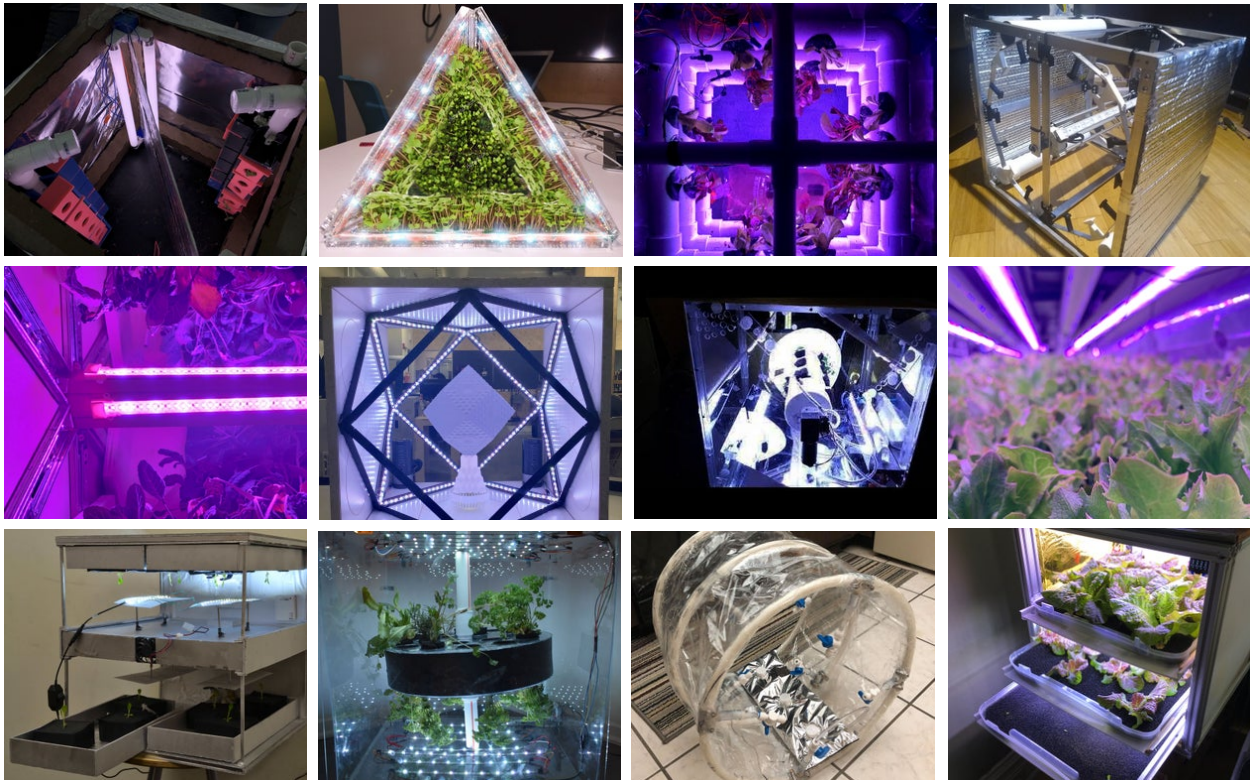
- New maker space at Fairchild, open to students and members of the public, to design, build, and test new plant growing technology.
- Challenge for local elementary students to imagine and draw systems for growing plants aboard spacecraft. Students have submitted more than 3500 new designs.
- Three one-year nationwide maker challenges for high school, collegiate, and professional teams to design and prototype new hardware that can overcome limitations of current systems. In the first year, we received 130 entries.



Growing Beyond Earth Innovation Studio, a public maker space within two adjacent, newly-renovated buildings at Fairchild Tropical Botanic Garden. Left: design and fabrication lab. Right: testing lab.



A new plant growing system designed by a local third grade student to maximize the use of three-dimensional space. Left: Drawings, including the design of each unit and arrangement of multiple units. Right: Prototype developed in the Growing Beyond Earth Innovation Studio.



Finalist prototypes from year 1 of the nationwide Growing Beyond Earth Maker Challenge, selected from 130 high school, collegiate, and professional entries.