



Upward Growth: Engineering Interactive Indoor Plant Systems in Baltimore Public Schools

CENTER FOR LEADERSHIP EDUCATION

Victoria George, Joshua Montano, Jam Navarro, and Cameron Lee

Faculty Advisor: Alissa Burkholder Murphy Community Partners: Anne Rosenthal, Laura Menyuk, Laura Genello

DESIGN CHALLENGE

1 in 4 Children in Baltimore have limited access to healthy food at home

The Baltimore City Public School Farm to School (F2S) combats this problem gardening, which helps teach:



Science Curriculum



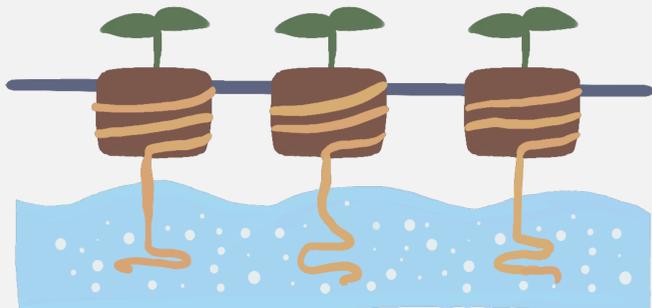
Nutrition and Healthy Decisions



Social/Emotional Learning

87% of teachers report increased student engagement during F2S sessions

Farm to School needs a way to scale garden-based curriculum to more schools without adding more to a teacher's workload, leading us to wick hydroponics.



SOLUTION: Tabletop Wick Hydroponics Unit



Wicks draw water and nutrients to the root of the plants through capillary action.



20 min setup



water changed 1x every 2 weeks



\$30 per unit



grow lights for low-light classrooms



2 kids per net pot for hands on learning

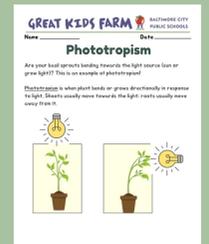
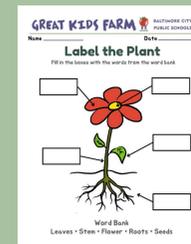


Support curriculum based on grade level



Supporting Curriculum

Activities align with BCPS Next Generation Science Standards to support engagement



0 weeks of basil growth



4 weeks of basil growth