

Project Title: HS Sustainable Greenhouse and Learning Center
(Ida Kushner Sustainable Greenhouse and Learning Center)

Budget Request:

\$200,000 for the Greenhouse, upgrade to the outside courtyard, hydroponics biolab, vertical gardens, and including incidentals for construction of foundation and electrical installation

What are the objectives of the project?

The main objective of this project is to create a sustainable outdoor/indoor space (including a Greenhouse) to serve as an educational, recreational, and service-related environment for the Highland Park High School community.

Description (project goals and plan):

- 1) The initial goal and plan is to develop the courtyard space and Greenhouse in coordination with buildings and grounds, the teaching staff, and student volunteers.
- 2) In preparation for using the space for academic purposes, we would integrate the learning space into the existing relevant courses (environmental science, nutritional science, health and physical education, etc.) and/or develop new courses or independent learning opportunities for students.
- 3) The next goal would be to incorporate the maintenance and recreational use of the courtyard and sustainable Greenhouse into the whole school community. In addition to the physical greenhouse, the area could include tables and chairs, benches, etc. to serve as an inviting space for recreation and outdoor learning activities. The food produced from the Greenhouse can be incorporated into the menus and donated to local centers.

Describe Population of Students Served:

This project will serve all students at Highland Park High School and potentially the middle school in future years. While the greenhouse can primarily function in content related classes and activities such as biology, environmental science, nutritional science, health and physical education, and environmental club, all students, teachers, and staff can benefit from the greenhouse and learning center. It will serve as a focal point for the

school and provide service opportunities for students to help maintain the space. Additionally, once fully functional, food can be produced to serve the school community.

Budget request details:

Item	Cost	Supplier	Comments
Greenhouse (plus taxes, shipping, construction)	Greenhouse and features: ~\$20,000 (\$19,345) Expert Construction: ~\$16,000 (\$15,962) <i>Estimated Shipping: ~10% of purchased items and services = \$3,600</i> TOTAL: ~\$40,000	Growing Spaces	See website See cost breakdown
Dehumidifier	Dehumidifier: \$842.01 <i>Estimated Shipping: ~10% of purchased items and services = ~\$85</i> TOTAL: ~\$950	Growing Spaces	See cost breakdown
Starter Kits	Kit @ 159 each x 20 kits = \$3,180 <i>Estimated Shipping: ~10% of purchased items and services = ~\$320</i> TOTAL: ~\$3,500	Growing Spaces	See cost breakdown

Garden potting soil for small pots	100 x \$10 for 25 qt. Bags = ~\$1,000	Home Depot	https://www.homedepot.com/p/Kellogg-Garden-Organics-25-Qt-All-Natural-Indoor-Potting-Mix-3023/317982645
Organic garden soil - bulk	10 yards = ~\$3,250 <i>Estimated Shipping: ~10% of purchased items and services = ~\$325</i> TOTAL: ~\$3,500	KIS Organics	https://www.kisorganics.com/collections/organic-soil-for-sale-bulk-potting-soil-mix/products/kis-organics-commercial-growers-mix
Grow lights	10 - 4 ft fixtures at \$65 each ~\$650	Home Depot	https://www.homedepot.com/s/grow%20lights?NCNI-5
Pots and containers	\$4 - \$25 each with approximately 100 = ~\$400 - ~\$2500	Home Depot	This is a variable that will need to be finalized after plant selection and space evaluation
Seeds	\$2-\$10 per packet; 100 packets = ~1000		https://www.harrisseeds.com/collections/organic-vegetables
Additional Seeds	TBD	Seeds - courtesy of Highland Park Seed Library	May not be a cost

Foundation for Greenhouse	for 25' x 25' - ~\$30,000	Antonios Fiotakis Construction	Company used previously by district
Resurfacing courtyard	50x40 Pavers with benches ~\$40,000 Fixed drainage issue ~\$20,000 - \$30,000	Antonios Fiotakis Construction Drain busters	
Outside table - workstations	\$847 x 6 = ~\$5082 with shipping estimated	School Outfitters	For near the Greenhouse and inner courtyard next to Robotics room
Rain barrels and downspout attachments 55 gallon capacity	3 - 55 gallon at \$179 each = \$537	https://www.bayteccontainers.com/55galrawkit.html	Will work with Rutgers to help install https://water.rutgers.edu/StormwaterManagement/rainbarrelbrochure.pdf
Vertical gardens structure	~\$1500	https://livewall.com/products/livewallscreen/	Food source for cafeteria lunches built in the cafeteria
Farmbot	~\$1695	https://farmbot.com/pages/express	Will involve coding and hydroponics
Laptops for coding and tracking work	ESTIMATE 4 x \$1000 = ~\$4000	Quotation #: 22985178 SHI	HP ProBook 450 G9 Notebook - Wolf Pro Security - Intel Core i5 1235U / 1.3 GHz - Win 10 Pro (includes Win 11 Pro License) - Iris Xe Graphics - 16 GB RAM - 256 GB SSD NVMe - 15.6" IPS 1920 x 1080 HP, Inc. - Part#: 687P0UT#ABA

Minimum of 2 Electrical outlets installed by greenhouse	ESTIMATE Gary & Willie overtime one weekend \$2400	Facilities Maintenance personnel will instal	I
Total	~ \$170,000 (this includes estimates for laptops and electrical work)		