

GHV MISSION

To educate, excite, and equip an inclusive population of elementary students to pursue a sustainable world through a hands-on program in bio-science and urban agriculture with the following goals:



1 Introduce children to a rich, hands-on learning experience that improves bioscience education



2 Increase student understanding of proper nutrition, and encourage families to adopt healthier everyday habits



3 Lead more students to careers in bioscience to meet the pressing need to fill emerging jobs in science and agriculture

URBAN EDUCATION ALLIANCE

More than 1,500 students in the participating schools represent a diverse socio-economic and geographic spectrum. Reaching yet further, the Venture plans to employ state-of-the art communication channels to share its programs with other elementary schools across the St. Louis region and beyond.

THE GREEN HOUSE VENTURE is a unique STEM program taught in a working urban agriculture environment, involving students from four elementary schools within south-central St. Louis that comprise the Urban Education Alliance:

ST. MARGARET OF SCOTLAND {Parochial}

MULLANPHY INVESTIGATIVE CENTER {Public Magnet}

TOWER GROVE CHRISTIAN ACADEMY {Christian}

ST. LOUIS LANGUAGE IMMERSION {Charter}

Due to changes in the curriculum and new geographic location of Language Immersion School, this will be their final year participating in the program. The Venture leadership is currently in the process of identifying and pursuing additional charter schools to replace them and join the Alliance.

PROGRESS REPORT: 2023 RECAP

GHV CAMPUS GROWTH PLAN

*Since **THE GREEN HOUSE VENTURE** began in 2015, the program has followed a growth plan encompassing the following physical assets that comprise the GHV Campus:*

- ... Development of the Embankment Greenway
- ... Creation of the Terrace Garden
- ... Installation of corner gardens, signage and other features that enhance and brand the campus
- ... Construction of the Education Center



This state-of-the-art facility will enable students from around the St. Louis region to engage in various ways of growing and producing food year-round in the heart of the city.

We continue to make progress in our fundraising efforts to build the Education Center. Numerous preparations have been made so we are ready to break ground when the necessary funding has been secured. Key accomplishments this past year included completing the design development drawings, reengineering elements of the project to bring it in line with our planned budget, and pricing out the project with subcontractors.

We also produced two new videos that provide compelling insights and information about the powerful potential for what the Education Center will offer to students in the Venture program.



Welcome to the Green House Venture Education Center

<https://www.youtube.com/watch?v=2Hp-aki-4RA&t=22s>

The Value of the Green House Venture to St. Louis Schools

<https://www.youtube.com/watch?v=6K6Enw3EluQ>



VENTURE HIGHLIGHTS FOR 2022-2023

Signage Program

A Signage Program was launched in October of 2022 to provide a wayfinding system for **THE GHV CAMPUS**. It was completed earlier this year, approved by MODOT, the City of St. Louis, and two neighborhood organizations. The first phase of the plan was implemented in late May with curb painting and initial signs put in place. The scheduled work is set to be completed in late July. Additionally, we have begun conversations with BPS about plans for street light banners and crosswalks.



Campus Maintenance

A coordinated plan has been developed for the routine maintenance and planting of the entire expanse of **THE GHV CAMPUS** involving numerous organizations that comprise our key partnerships.

Bee Lab

Dr. Gerardo Camilo, a nationally recognized expert on bees and pollinators, has been involved with the Venture since the early days of the organization. He has worked with us in multiple ways, including our Adventure Summer Camp and the Terrance Garden. He also led an important study this past year, with interns from the Saint Louis University Bee Lab, on pollinating bees on our Embankment Greenway.

Website Update

The Venture's website underwent a major revision in 2022 with the help of webmaster, Studio 2108. With its new platform, the website is now more functional and we are now able to revise it on a regular basis. That allows us to provide timely updates on various stages of **THE GHV CAMPUS** development, including the Education Center and the Growth Forward Campaign to finance it.



Shaw Art Fair

THE GREEN HOUSE VENTURE is participating this year in the Shaw Art Fair, a 30+ year function with artists from all over America that is unique to the Shaw Area. Participation in this event expands the relationship of **THE GHV CAMPUS** to the south-central area of St. Louis.



Ambassadors Program

Due to the challenges posed by Covid 19, our Ambassadors Program had to be suspended, and different methods were developed to maintain the work with our Alliance schools. This past year, we established our new Classroom Outreach Program. Under the direction of Becky Finnegan, a former principal and 35-year educator, we were able to reestablish work with our Alliance Schools. Working with teachers and staff, Ms. Finnegan has been able to expand access to the Venture's programs with many more participating students.

Computerized Growth Chambers

The setbacks from Covid 19 also curtailed the use of our Computerized Growth Chambers, which were an important learning innovation for Venture students. Over the last six months, an intern from the University of Missouri-St. Louis has worked on reactivating the chambers, and they will be installed for the fall semester of 2023. These advanced tools will enhance the quality of our Classroom Outreach Program and strengthen curriculum activities for our Alliance schools.

MODOT Acknowledgment

Every year the Missouri Department of Transportation (MODOT) sends a representative to evaluate the performance of its lease with **THE GREEN HOUSE VENTURE**. This year, the MODOT representative was so impressed that she sent pictures and positive commentary to her boss. Her glowing review led to an excellent article in the monthly MODOT publication, Connections, that is sent throughout the State of Missouri to all MODOT offices across the state.



Municipal Approvals

THE GHV CAMPUS is located in the Shaw Historic District, requiring municipal approvals for different aspects of our work, such as the design of the Education Center, the changing of zoning from residential to commercial and institutional, and more. All plans have been approved by the various municipal departments, clearing the way for the construction of our Education Center.

Neighborhood Assets Map

We updated our Neighborhood Assets Map to further define the main features of the area served by **THE GREEN HOUSE VENTURE**. Among those features, the map shows the physical proximity with several prominent organizations and institutions whose work is aligned closely with the Green House Venture's emphasis on STEM education.

RECOVERING IN THE '22-'23 SCHOOL YEAR

Following this year's end of Covid restrictions, we restarted service to Alliance schools participating in the Venture program. Adapting teaching methods pioneered in our Ambassadors After-School Program and Adventure Summer Camp, we concentrated on a new initiative, the Classroom Outreach Program. It involved working closely with teachers and a large number of students in two kinds of activities.

One activity engaged students in using Computerized Growth Chambers to cultivate cold-hardy seedlings to transplant to cold frames in the Terrace Garden. In the upcoming school year, those chambers will be equipped with advancements for more precise water and nutrient control.

The second activity involved cultivating edible plants in other areas of the Terrace Garden and studying native Missouri plants and bees on our Embankment Greenway.



Some classes were involved, in building the cold frames to extend the growing season, some starting

seedlings for them, some cultivating open areas along the terrace as the weather warmed in the spring, and some exploring our Native Plant and Pollinator Garden to learn about seed dispersal and ecology. By May, radishes, climbing beans, and a wide variety of edible flowers and greens—from nasturtiums and pansies to kale, chard and red-leaf lettuce—filled the terrace.

Our aim at the outset was to develop engineering skills involved in designing the cold frames, which students built a few weeks before the end of the winter. Then they identified appropriate plants to populate the frames and the open beds around them, and they learned the basics of planting. At harvest, we invited students to taste various kinds of nutritious plants that few of them had ever encountered. This model of a mini greenhouse is an example of our plans for the large physical greenhouse in the Education Center.

Throughout the year, we were focused on creating a common set of activities to offer teachers each term. With the use of that curriculum, a student who starts with us in the fourth grade will experience a three-year learning curve that continually offers new topics, greater challenges, and more advanced scientific knowledge and skills.

BEE STUDY ON THE GREENWAY



Over the past year, **THE GREEN HOUSE VENTURE** has been collaborating with the Department of Biology and the Bee Lab at Saint Louis University on a study of great importance. One of the Venture's core features is the Embankment Greenway, a 3.7-acre expanse that was created along Interstate Highway 44 to provide a habitat for pollinating bees and butterflies to thrive.

Within a few months of beginning the study, researchers found strong implications that highways margins can provide good habitat and ample resources for bee pollinators. Since there are thousands of miles of highways across the country, the additional habitat for bees can help with food security by providing the essential pollination for food plants in gardens and farms. Preserving these spaces for pollinators could be beneficial economically, as well, since it would reduce mowing those areas along the roadways.

In the west end of the Embankment, persistent invasive species were removed during this past year, and the entire area was reseeded with a 50-species mix of native pollinator plants and grasses. That kind of diversity is the key to creating a robust native habitat because 80% of pollinators are specialists, relying only a couple of species of native plants to complete their life cycle.

As we move into the fall semester, further research is being conducted by the Bee Lab to determine what additional benefits could come from better use of the growing potential of our interstate highway system.



FINANCIAL UPDATE

The Venture continues to attract significant interest in funding its growth. We have received funds and pledges of \$1,530,373 through our Growing Forward Campaign specifically for the construction of our Education Center.

In addition, donations for ongoing operations from the beginning of the project through June 30 of this year have reached \$886,842. Of that amount, approximately \$280,000 went to the construction of our magnificent Terrace Garden, which has attracted widespread attention and provided extraordinary learning opportunities for our students.

That brings total donations raised to \$2,417,215 – an impressive investment in an innovative Venture for which we are deeply grateful.

With the help of our fundraising consultants, we are continuing to make inroads with organizations and individuals who can contribute the capital needed to begin construction on the planned Education Center, which will be the crown jewel of the GHV Campus.

For the past four years, **THE GREEN HOUSE VENTURE** has participated in the region-wide fundraising program called “Give STL Day.” This year, we received \$3,873, bringing our 4-year total to \$13,253. That’s an exciting accomplishment that not only provides important financial support, but also raises awareness of the Venture’s work throughout the community.



THE **GHV** CAMPUS DONORS

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KEY PARTNERSHIPS

The following organizations contribute an array of services to expand awareness of THE GREEN HOUSE VENTURE, to promote our mission, and to ensure that the GHV Campus is maintained throughout the year.

- ... Tower Grove Park
- ... Operation Food Search
- ... Forest ReLeaf of Missouri
- ... Saint Louis Zoo/Coahoma Orchard
- ... Saint Louis University and Department of Biology
- ... Washington University
- ... University of Missouri–St. Louis
- ... Harris-Stowe State University
- ... St. Louis Community College
- ... Saint Louis University High School
- ... Switch
- ... AMEN St. Louis
- ... Focal Pointe
- ... St. Louis Chapter of Master Gardeners
- ... St. Louis Chapter of the Wild Ones
- ... City of St. Louis Water Department
- ... Missouri Department of Transportation (MODOT)
- ... Missouri Department of Conservation
- ... Danforth Plant and Science Center
- ... DTLs Landscape Architecture
- ... Shaw Neighborhood Improvement Association (SNIA)
- ... Shaw Nature Preserve
- ... Tower Grover Neighborhood CDC
- ... Brake Landscaping Service
- ... Hercules Construction Management Company
- ... Native Landscape Solutions
- ... Urban Improvement Construction (UIC)
- ... Wild Carrot
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- ... Studio 2108
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