**Mission**

To create a nationally visible demonstration facility for year-round, sustainable, urban agriculture, one designed to enhance understanding of the cycles and processes of nature, to improve the education of underserved primary-school children, and to supply those in need with fresh produce, distributed through outreach clinics and school lunch programs.

**Sustainable Design**

The Green House will incorporate
- Solar generation of electricity
- Passive and active solar heating
- Heat generation in external composting beds
- Geo-thermal temperature ballasting
- Aquaponic production of fish and produce
- Roof-top growing
- Outside plantings of native Missouri grapes, nuts, and other crops
- Ozone testing garden and weather station
- Road-margin food production on an adjacent slope of I-44.

**Partners**

The Venture brings together ideas, expertise, and resources from three kinds of organization that rarely collaborate:

- **A major research institution:** Saint Louis University (providing leadership, design expertise, and educational programming)
- **A non-profit organization:** The Green House Venture (responsible for raising funds, developing and building the facility, and sustaining it through an endowment)
- **Three primary schools:** a public magnet school (Mullanphy-Botanical Garden), a parochial Catholic school (Saint Margaret of Scotland), and a charter Montessori School (City Garden).

All the partners are located near the Missouri Botanical Garden and the Health Sciences Campus of Saint Louis University.

All are committed to teaching racially diverse children of limited means—particularly in STEM subjects, growing, and nutrition.

All are committed to improving health and nutrition in the surrounding city.

**Potential Collaborators**

- American Heart Association
- Casa de Salud
- Community Alliance for Education
- Gateway Greening
- Health Resources Center
- Missouri Botanical Garden
- Missouri Foundation for Health
- Missouri Office of Minority Health
- Missouri Technology Corporation
- St. Louis Public Schools
- Tower Grove Development Corporation

**Programming**

**Learning encounters:** 50-minute, one-time introductions; age-sensitive, K-12 and adult

1. Sun and Plants
2. Energy-Efficient Design
3. Economical Heating and Cooling
4. Aquaponics and Micro-Ecosystems
5. Life Cycles of Fish
6. Life Cycles of Plants
7. Bugs and Diseases
8. Art and Writing from Nature
9. Nutrition and Cooking
11. Sustainability
12. Global Outlook for 2050

**Seed-to-harvest growing experiences:** 45-minute sessions once a week for 8 weeks; middle-school classes.

**After-School and Saturday Programs:** 8-10 weeks, 1-3 sessions per week; advanced primary-school children.

**Summer Camps:** sessions lasting from a morning to a week, or on regular days over longer periods; advanced primary-school children.

**Professional Development Courses:** from one to three days, 2-6 hours a day; teachers at all levels.

**Regional Impact**

Following its projected opening in fall 2018, the greenhouse will begin phasing in outreach programs to schools, clinics, and residents in other areas by

- Streaming lessons into classrooms
- Hosting educational field-trips and special events
- Providing workshops for amateur and professional growers
- Teaching ways to build and operate small, inexpensive aquaponic units
- Supplying food to school-lunch programs and to patients being treated at SLU clinics for obesity, diabetes, and heart disease.

**Contact Information**

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