

Windham Endowment's Project Greenhouse

Description of the issue or need

Construction of a greenhouse was discussed during the planning of the new Windham High School ten years ago but funds were not included for it in the original bond. After the completion of the high school, the Endowment started the Greenhouse Project during its *Capital Campaign for Windham High School* and fundraising has continued since then.

The goal of the Windham Endowment's Greenhouse Project is to raise sufficient funds to construct a greenhouse at Windham High School, creating a hands-on education environment that allows students to learn by doing and develop a fundamental understanding about what sustains them. When the greenhouse is completed, its use will be fully integrated into the curriculum at the high school as well as into portions of the curriculum throughout the school district. The greenhouse will also be made available to various clubs in town as well as for adult continuing education.

Program or project activities including specific goals and outcomes

The greenhouse will be a cross-curricular classroom, designed to meet the needs of students in multiple disciplines, and creating a real world learning experience, providing both traditional and non-traditional learning opportunities. In this experiential classroom, students will learn by doing, improving critical thinking skills by learning in a truly hands-on and discovery-centered environment.

With that in mind, the plan is for the greenhouse to be integrated into the Windham High School curriculum in the following manner:

- **Biology** (science course required of all graduates) – Students will learn about botany and conduct experiments to explore the intricacies of plant growth.
- **Botany** – A new class will be added where students will explore the science of botany at a deeper and more hands-on level.
- **Cooking** – Students will grow herbs, vegetables, and other edible plants for use in cooking classes.
- **Art** – Students will utilize the plants growing as models for art projects.
- **Business** – Students will market and sell plants grown in the greenhouse.

It is important to understand how inclusive the greenhouse will be to the entire high school community – from the plants that can be grown and sold by the DECA Business Club as a school fundraiser to the herbs that can be grown to be used in cooking classes and in the school lunch program. In addition to the current classes and clubs which will benefit from the future greenhouse, the district may create new courses and activities, such as a greenhouse club and a hydroponics class, giving students exposure to gain experience that will support future employment opportunities.

Also, the greenhouse will be available to the entire Windham community through programs provided by the Windham Garden Club and continuing education opportunities supported by the Windham School District.

How the project connects to education and the community

The Greenhouse Project fits very well with one of the Endowment’s goal, supporting education. As Kori Alice Becht, the Director of Curriculum, Instruction, and Assessment of SAU 95 says:

In today’s world, more than ever before, our responsibility as educators is to help students apply knowledge to authentic learning and real world problems. Learning is not a passive process; rather it requires the active engagement of the whole student in order to achieve this goal. The addition of a living laboratory, with the construction of a greenhouse, at WHS, will allow all educators to create these experiences and opportunities for students. Students in core science courses will have the opportunity to learn about processes such as photosynthesis and design their own experiments in a setting specially designed to meet this need. It will facilitate the space and create an environment to explore the interdisciplinary nature of our K-12 learning community.

The full text of Kori’s letter of support is attached.

Final phase and program cost

We currently have in hand or have donor pledges for over 80% of the required \$125,000 project funding. A very generous dollar-for-dollar challenge grant is currently underway and will be in effect until we reach our goal. The remaining \$10,000 needed to begin the project would thus be doubled. Our goal is to begin construction at the end of this school year and to have the new facility open in the fall of 2016.

Windham Endowment Greenhouse Project

Item	Cost	In-kind contributions		
Structure, Supplies and Equipment				
Greenhouse Structure <i>16' x 36' shed style lean-to 16mm multiwall polycarbonate greenhouse</i>	\$99,862.00			
Architectural/Engineering drawings For stamped approval	included			
Heating System <i>Modine Effinity 85</i>	included			
Controls <i>Wadsworth Envirostep (including weather station)</i>	included			
Energy/Shade curtain system	included			
Benches (6 stationary)	included			
On bench watering system	included			
Sprinkler system	included			
Installation	included			
Utility hook ups <i>Water, propane, electricity</i>	\$2,500.00			
Site prep, foundation, and masonry services	\$16,500.00			
Contingency funds	\$6,000.00			
Materials (pots, tools, dirt)	\$500.00	\$500.00		
			Funding to date*	Funding Remaining
Total project cost and funding	\$125,362.00	\$500.00	\$104,500.00	\$20,362.00

* Funding to date includes contributions, pledges, matching gifts, and grants