



# Pollinator Project

*Turning lawn into habitat for education*



Spring 2017

Avanti High School: Sustainable Ag.



## Inside

**Hands-on learning:** How Avanti's unique partnership with Madison brings authenticity to learning

2

**Solitary Bees:** The Unsung Heroes: How our garden helps our agro-ecosystem and facts about mason and leaf-cutter bees.

5

## The Back Story: Student Inspiration

During this past Fall 2016, the Sustainable Agriculture class went to the Freedom Farm at Olympia High School to help harvest produce that was being grown for the annual Harvest Festival at Madison Elementary School. While there, students from Avanti were inspired by the rows of dahlias, amaranth, strawflowers, and sunflowers being grown as cut flowers for bouquets. These students were also very interested in the plight of pollinators from things like habitat loss and use of harmful pesticides like neonicotinoids. While traveling home, these students discussed the possibility of expanding the Madison/Avanti Giving Garden to include a pollinator habitat and cut-flower garden space. And so...



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4



## Hands-on Learning



### Avanti's unique partnership with Madison brings authenticity to learning

Last year, I taught high school biology to a group of sophomores who were definitely NOT interested in school. The refrain “when am I ever going to need this?” became a mantra for our first few weeks together. Over time and through student-driven field research projects, we began to see eye-to-eye on the importance and impact of education...but it was definitely a struggle for both parties involved.

This year, I am privileged to work with students at Avanti High School. These are young people that have chosen to take the reigns of their own education. Yet still, teaching the chemical formula for photosynthesis can still seem irrelevant to a young person (ANY person!) without a direct way to apply that information.

This is where our partnership with Madison Elementary School comes in.

There is a gold mine next door. It turns out that the pressure of *teaching* an 8-yr-old about how nutrients cycle through a worm bin is a fantastic motivator for learning.

Our Garden Buddies program requires Avanti students to prepare a lesson for a specific Madison classroom and then to teach that lesson (with 1-3 students) in the garden. The magic is real!



# Solitary Bees --- The Unsung Heroes



## Bees vs. Wasps

### Bees:

- Sting only once\*
- Docile
- Herbivores
- Furry
- Family: Apidae

### Wasps:

- Sting many times
- Aggressive
- Often carnivores
- Little to no hair
- Family: Vespidae

### Both:

- Insects
- Order: Hymenoptera

\* Exception is bumblebee

### Allergic?

Though the risk of being stung by a bee is low, please be cautious while walking through the garden on warm & sunny days. Stay safe, stay calm, use another door if necessary, and carry your epi-pen.

When people hear that familiar ‘bzzzz’ or think about pollination, the honeybee comes to mind. Hives buzzing with activity and dripping with sweet honey. In fact, most of that buzzing you hear as you pass the garden is probably coming from one of the 200 species of [solitary bees in the PNW](#). These little gals and guys (fun fact: all honey bee workers are female) live all on their own and actually contribute to most of the world’s pollination.

Like honey bees, these solitary bees are docile and rarely sting since stinging is a death warrant: vital organs are pulled out of the bee when the barbed stinger is deposited. Solitary bees are even less likely to sting since they are not defending a hive.

It is intensely satisfying to watch as one of these bees collects pollen from mustard flowers until she can barely fly from all the weight, carry it back to a tunnel, disappear for a minute, and then fly back out for more. A mason bee will take up to 80 trips just to get enough pollen for ONE egg and there can be up to 15 eggs in a tunnel depending on its length. Mason bees also collect mud to make each egg its own cell.

Want to learn more? [This vimeo](#) by Team Candiru is an excellent beginners guide to solitary bees.

Read about an Avanti grad’s bee-boxes [in The Olympian](#)



Continued from page 1

we set out to make that dream a reality.

Over the course of the school year, students have been researching details about pollinators in our area of Washington, proposing the project to the School Board, helping to write grants and letters to procure funding for the project, submitting landscape designs, and leading educational workshops for the kids at Madison.

Our efforts have paid off.

Through several grants (the Nature Conservancy's [Nature Works Everywhere](#) grant, The Olympia School District Education Foundation, the Olympia Garden Club, and Washington's Fish and Wildlife Service) we have been able to partner with local artist and environmental educator, [Carrie Ziegler of EarthArt](#). Carrie's past work –some of which has involved Avanti—includes The Plastic Bag Whale, The Butterfly Effect, and One Water (currently featured at the LOTT center downtown).

Carrie's work has already involved students in the design process for a 7-foot cement sculpture to contain native pollinator habitat. The tree sculpture was collaboratively designed after learning about pollinators: challenges they face, ways to attract them to a garden, and their importance to humans and ecosystems.

Our latest efforts have included a Build Day on Sat. May 6<sup>th</sup> with help from Lowe's Heroes (brought to us by The Nature Conservancy). We managed to sheet mulch most of the lawn, build LOTS of raised beds, start making stepping stones for the pathways, and plenty of painting.



Once our soil is delivered, Avanti students will start planting pollinator-friendly plants and cut-flowers that they have researched throughout the year. Stay tuned and watch as our garden grows!



## Want to Help?

There are many ways to get involved with our three garden spaces. Every Saturday there is a work party from 10-1 in the Madison Avanti Giving Garden. Feel free to drop in on a Saturday to weed, plant, small construction projects and more! We are also looking for volunteers to help with watering and weeding the Sagan Satellite and Pollinator Garden over the summer.

**1 Words of encouragement:**  
A quick 'thank you' can go a long way to the students who work hard in and out of class to make our 3 gardens grow.

**2 Work Parties & Summer Help:**  
Summer 'garden angels' take home what they harvest! Fresh tomatoes anyone?

**3 Plants, Supplies, Donations:**  
Always looking for that discarded wheelbarrow or bee balm!

**Email Quasar:**  
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# Avanti

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