

# THE LIVING ROOM

This document is a brainstorm session. Everyone was given a color text to help organize who said what.

Brooke Mellema - LAYOUT PRESENTATION

Brittany Vandenberg - BUDGET

Jared - LAYOUT

Noah - PLANT LIST

The original intro I made with the design idea:

Unless you have been hiding under a rock, most of you understand how the pollinator population has dropped to a dramatic low. Many organizations suggest pollinator gardens to the urban and rural communities alike. But what good does that do the gardener? What's in it for them?



My idea for a project incorporates that in "the living room." This room is in the shape of a hexagon in honor of the natural shapes bees create. The walls would be made of chicken wire and recycled wood branches. These walls would create an environment for vegetables that climb (peas, cucumbers, etc.). Areas would be left open to accommodate sunlight into the structure. This goes for the "roof" of the structure. The inside will include seating created similar to those created by [Terra](#). There will be a rain barrel that acts as the watering system that will be modeled after a chimney. "Side tables" will be constructed from bamboo rods to create a

“bee hotel.” Ground cover plants will act as the flooring. The outside will be surrounded by a garden with a mix of native species and vegetables. It will have a pathway in the form of hexagon shaped stepping-stones that allow guest to walk among the flowers and see into the structures. This project creates a way of balancing nature’s need and human need.

The problem statement should be in the form "X needs Y."

The strategy for gathering information brings us into the Listening or Empathize phase of the design thinking process.

Your strategy should involve gathering relevant information from relevant stakeholders. You may use any strategy EXCEPT a survey. Be creative! What approach will encourage people to tell you interesting information?

Tag line idea: If the bees go, they are taking us with them.

Problem statement: Bee population in danger which then affects many plants and wildlife that depend on these bees to pollinate and sustain their species. X needs Y: plants and wildlife need bees.

Strategy for gathering information: Finding out if the general public knows about the issue, and if companies/public are able to take this information and actually do something with it or if it’s too complicated.

- scientific studies which we can definitely implement into our project
  - Scientific studies would be very valuable information. Especially on urban beekeeping and pollinator gardens
  - Look at other projects similar to this project in different parts of the country
- but as far as actually gathering information from the public/relative stakeholders:
  - We can contact the S.A.P. and get information about the purpose of their bee’s and find out how hard they had to fight to get their bee’s: cost and installation process
  - Interview business owners and ask about how easy/difficult it would be to set up pollinator gardens
  - Open ended question on Facebook such as: “how do you think GR would benefit from a pollinator garden and why?” this could even be a way to get information out there in the world as well. Many people love to give their true opinions without face to face interaction
    - There are many pages on facebook devoted to bees and I’m sure they would be willing to post a question as well
  - Urban Roots in Grand Rapids does know of local urban beekeepers that I’m sure would be very helpful and are very helpful - plus I already know them from another class. They also were just given a grant to implement their own pollinator garden.

TRELLO - DESIGN WEBSITE

Valerie - INFO

I figured since I created this project I should put down into words what I thought of. The original idea is at the beginning with some links.

For the layout, I would like this to be a quiet space. The world is pretty crazy right now, so when I created this I wanted this to be a connection to nature and plants (there is several studies on how this benefits general well being), but also serve a purpose to the declining bee population and show how easy is it to grow your own veggies. Basically, lawns should serve multiple purposes, in my opinion. I wanted this to be very similar to an actual living room. I would like to implement windows into it as well. Just gaps really in the walls if possible. There are also these things called bee motels. I want them to act as a side tables in the structure. These add a haven for solitary bees that are extremely crucial in pollination. In my original design I had thought about adding in “shelving”, but I think the best use of the structure would include more seating.

Here is the link for the bee motel designs:  
<http://www.foxleas.com/make-a-bee-hotel.asp>

Here is the link for the chairs I wanted to be implemented into the plan. They can also be made on a larger scale to mimic a couch:  
<http://www.boredpanda.com/growing-grass-armchair-terra-nucleo-andrea-sanna-piergiorgio-robino/>

We need native plants and vegetables only! The plants should bloom at different times. This structure will be serving as a corridor. Corridors in nature are small fragmented areas for migration and sustenance for pollinators where there wouldn't normally be one. Blooms at different times provides a great deal of benefits to not only the pollinators, but who ever is growing the vegetables. Although this project is designated for bees, all pollinators (Example: Monarchs) are struggling. Therefore I would like to incorporate plants that serve to multiple pollinators. This is a display, so although I'm all for a ton of green, colors attract pollinators and people. Aesthetics are a large part of this.

Here is a link of native Michigan plants and their times of blooming:

<http://nativeplants.msu.edu/uploads/files/Native-flowering-plants.pdf>

I hope this is helpful!

## Layout:

Dimensions:

20 ft. exterior hexagon

12 ft interior hexagon

4 ft deep gardens along perimeter

Materials:

6) 4"x4"x12' Cedar Posts

6) 2"x6"x8' Cedar Rafters

12) 2"x6"x20' Cedar Joists

21) 4'x8'x3/4" sheet of plywood for sheathing

~665 square feet of shingles

800 square feet of chicken wire fence. It's typically sold in 4 ft sections so 200 ft length of that would work

## Budget

Obviously more things will be added as we progress, this is just a starting point. Also, the cardboard cutouts for the furniture are pretty expensive, the chair is \$342.97 and the couch is

Living Room Project Budget							
Materials	Price	Quantity	Subtotal			Budget:	10000 (Subject to change)
Culvers Root	\$ 0.01	200	\$ 1.19			Remaining	
Milkweed	\$ -	200	\$ -			Balance:	\$ 8,096.11
Sunflowers	\$ 0.05	50	\$ 2.25				
Cup Plant	\$ 0.03	200	\$ 5.00				
Siberian Wallflower	\$ 0.05	50	\$ 2.50				
Golden Alexanders	\$ 0.02	150	\$ 3.00				
Alaska Peas	\$ 2.00	1	\$ 2.00				
Cucumbers	\$ 1.75	1	\$ 1.75				
Tomatoes	\$ 3.50	1	\$ 3.50				
Chicken Wire	\$ 20.97	4	\$ 83.88				
Shingles	\$ 26.50	20	\$ 530.00				
Plywood Sheets	\$ 35.00	21	\$ 735.00				
Cedar Joists	\$ 25.00	12	\$ 300.00				
Cedar Posts	\$ 18.97	6	\$ 113.82				
Cedar Rafters	\$ 20.00	6	\$ 120.00				
TOTAL			\$ 1,903.89				

\$645. Instead of buying those, there is an option to buy the plans for them which are only \$37.62.

## **INFORMATION:**

“Pollinators at risk” by Myran E. Watanabe (2014)

<http://content.ebscohost.com/ContentServer.asp?T=P&P=AN&K=93666947&S=R&D=aph&EbscoContent=dGJyMNxb4kSeprA4zOX0OLCmr06epq9Srqr4TbOWxWXS&ContentCustomer=dGJyMPGuslCyrLRKuePfgeyx44Dt6flA>

**ABSTRACT:**The article explores how human activities are threatening key pollinating insect species. Topics include the 2012-2013 crash of the monarch butterfly population, factors contributing to declining **pollinator** populations, such as habitat loss, climate change, and pesticide use in agriculture, the economic losses resulting from **pollinator** loss, and colony collapse disorder (CCD) in honey **bees**. Also discussed is a 2013 European Commission (EC) ban on three neonicotinoid pesticides.

“The Potential Consequences of **Pollinator** Declines on the Conservation of Biodiversity and Stability of Food Crop Yields.” Gordon Allen-Wardell et al. (1998)

<http://web.a.ebscohost.com.ezproxy.gvsu.edu/ehost/pdfviewer/pdfviewer?sid=5c7e1a9a-5612-43d9-b53a-69bfb38cdd01%40sessionmgr4009&vid=7&hid=4114>

**ABSTRACT:** Following reports of dramatic declines in managed and feral honey **bees** from nearly every region of North America, scientists and resource managers from the U.S., Mexico, and Canada came together to review the quality of the evidence that honey **bees** as well as other **pollinators** are in long-term decline and to consider the potential consequences of these losses on the conservation of biodiversity and the stability of the yield of food crops. These experts in pollination ecology confirmed that the last 5 years of losses of honeybee colonies in North America leave us with fewer managed **pollinators** than at any time in the last 50 years and that the management and protection of wild **pollinators** is an issue of paramount importance to our food supply system. Although there are conclusive data that indicate 1200 wild vertebrate **pollinators** may be at **risk**, data on the status of most invertebrate species that act as pollination agents is lacking. The recommendations from a working group of over 20 field scientists, presented here, have been endorsed by 14 conservation and sustainable agriculture organizations, research institutes, and professional societies, including the Society for Conservation Biology. Among the most critical priorities for future research and conservation of **pollinator** species are (1) increased attention to invertebrate systematics, monitoring, and reintroduction as part of critical habitat management and restoration plans; (2) multi-year assessments of the lethal and sublethal effects of pesticides, herbicides, and habitat fragmentation on wild **pollinator** populations in and near croplands; (3) inclusion of the monitoring of seed and fruit set and floral visitation rates in endangered plant management and recovery plans; (4) inclusion of habitat needs for critically-important **pollinators** in the critical

habitat designations for endangered plants; (5) identification and protection of floral reserves near roost sites along the “nectar corridors” of threatened migratory **pollinators**; and (6) investment in the restoration and management of a diversity of **pollinators** and their habitats adjacent to croplands in order to stabilize or improve crop yields. The work group encourages increased education and training to ensure that both the lay public and resource managers understand that pollination is one of the most important ecological services provided to agriculture through the responsible management and protection of wildland habitats and their populations of pollen-vectoring animals and nectar-producing plants.

**IDEAS TO INCLUDE:**

I also found some cool ideas for a bee hotel, these would be cool on the walls maybe.

