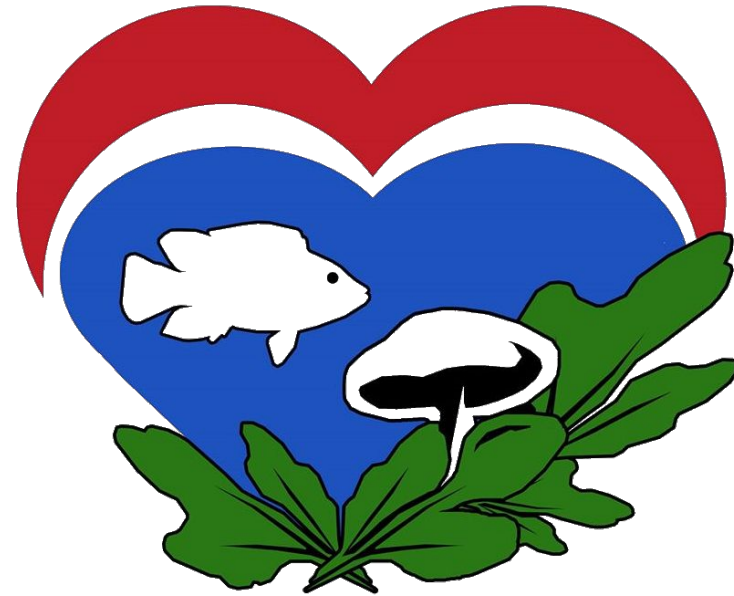


Aquaponics & Urban Farming: *Strategies for Combating Food Insecurities in Schools*



Green Acres Urban Farm & Research Project



East High School

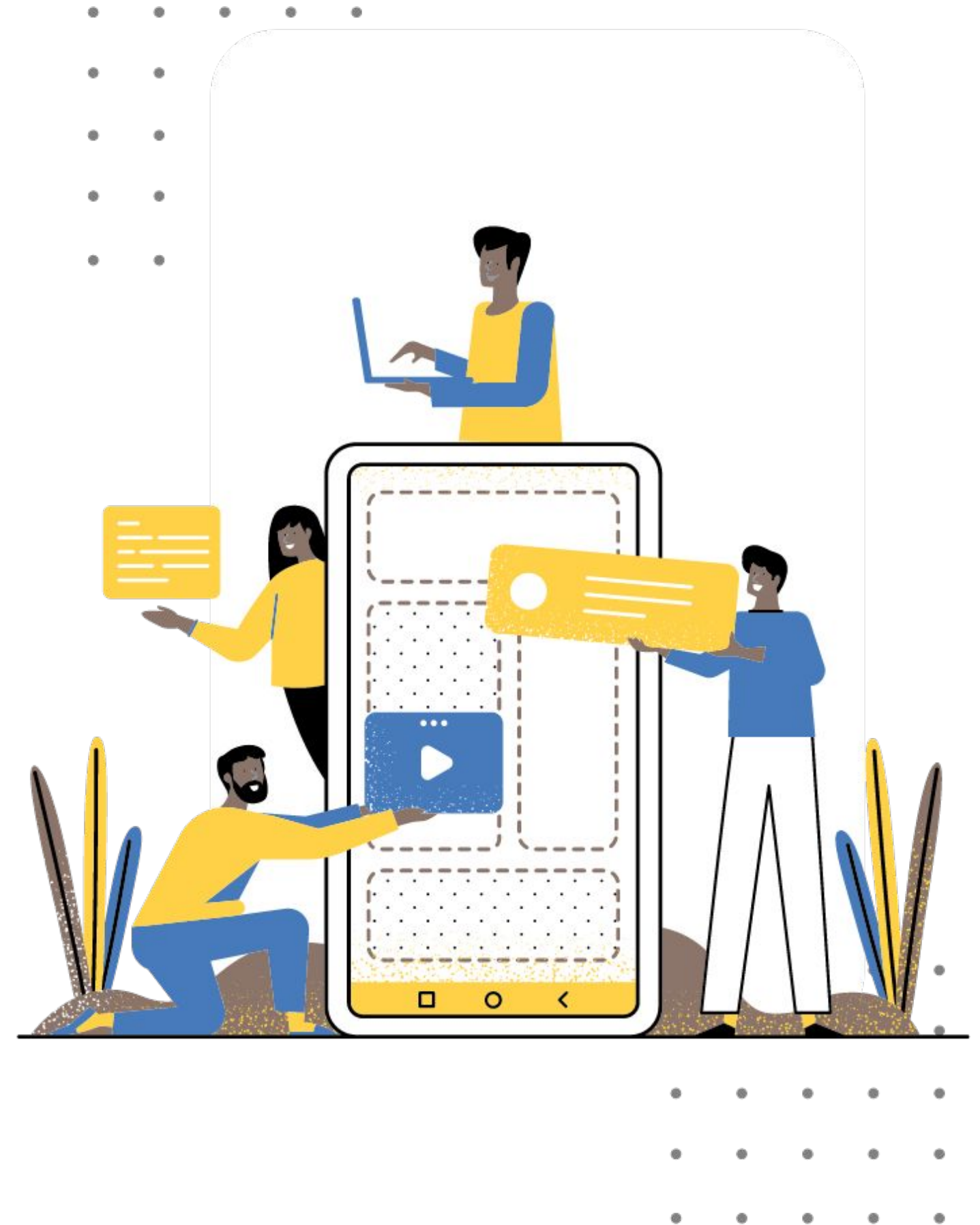
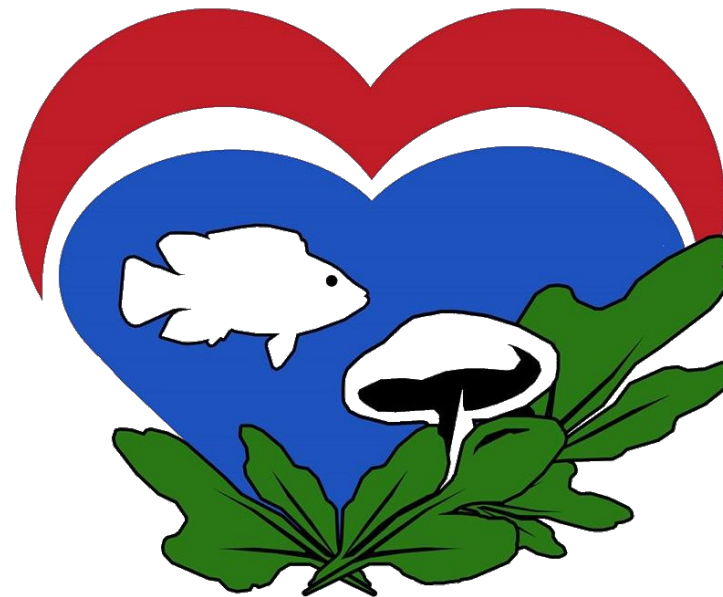
FEBRUARY 26, 2021



SESSION TEAM

Arianna
Damion
Janet
Jordyn
Selina
Valentina
Victor

Bill
Dawson
Elsa
Paul



WHO WE ARE



Arianna Herrera



Damion Singhakhoune



Janet Villa-Franco



Jordyn Marcille



WHO WE ARE



Selina Chun



Valentina Ramirez



Victor Herrera

THE WHY

According to a 2017 study by Health Forward, “15% of Kansas City, Missouri Residents are food insecure; ~56,698 adults, ~13,583 children.”



The HSM Group (2017). *An Invisible Problem: Food Insecurity in Kansas City Metro Area*.

https://healthforward.org/wp-content/uploads/2017/12/Food_Insecurity_White_Paper_2017.pdf

DEFINING KEY TERMS

- **Aquaponics:** A resilient farming system that provides wellness and better nutrition; it is a form of agriculture that combine raising fish in tanks (recirculating aquaculture) with soilless plant culture (hydroponics) ...
- **Urban farming:** Growing or producing food in a city, heavily populated town, or municipality...
- **Food insecurity:** The US Department of Agriculture defines food insecurity as a lack of consistent access to enough food for an active, healthy life..



Feeding America (2020). *UNDERSTAND FOOD INSECURITY*.

<https://hungerandhealth.feedingamerica.org/understand-food-insecurity/>

Plumer, Brad (2016). The real value of urban farming. (Hint: It's not always the food.) Vox. <https://www.vox.com/2016/5/15/11660304/urban-farming-benefits>



THE WHAT

- What is food insecurity?
- What are food deserts?

Subtopic 1 - History

Food insecurity has been an increasingly visible issue since the 1960's and is important today because of its impacts on students and families.

Subtopic 2 - Challenges

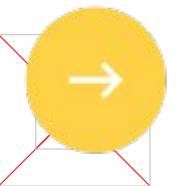
Challenges that our program attempts to address include accessibility, agricultural sustainability, and the impact of food insecurity on education

Subtopic 3 - Solutions

Students can create a Community Supported Agriculture Partnership with other schools to help support families in need with food.

HISTORY

- Food Insecurity became known in the U.S. in the 1960's
- Over the years the United States has put multiple nutrition assistance programs such as, Supplemental Nutrition Assistance Program, Women Infants and Children, the National School Lunch Program and more, to help people facing food insecurity and food deserts.
- Agricultural systems include: Aquaponics, Greenhouse, and Urban Farming.



CHALLENGES

Food insecurity impacts education

- Children who grow up in food insecure households often lag behind their food-secure peers in terms of cognitive, emotional, and physical development.
- People experiencing food insecurity often consume a nutrient-poor diet. Processed foods tend to be more accessible at a lower price. A nutrient-poor diet can contribute to chronic diseases.

Agricultural Unsustainability


- Traditional farming practices require large maintenance to restore the soil to a condition that can support plant life. If maintenance is not consistent, that depletes the soil nutrients continuously, such as, not rotating crops will eventually result in soil that is incapable of growing crops at all. Over time, this can decrease crop yields, which will make more people food insecure.
- Organic foods are not affordable and/or accessible.

Accessibility

- According to feeding America, in the Jackson County area about 813,840 people are struggling with hunger, and of those, 209,870 are children.
- The total population in the Jackson County area with low food access is 166,389.
- The Jackson County area has a population of 324,507 living in food deserts.

SOLUTIONS

- Aquaponics uses 90% less water than traditional farming; because aquaponics recycles the water in the system making it possible to grow in droughts and areas with little water.
- Urban farming practices composting, vermicomposting, and other soil regenerative processes.
- Participate in Agriculture 4-H Club Programs, which can help promote food security education and civic mindedness.
- Make contact with other schools to create farmers markets and co-ops with Community Supported Agriculture (CSA) creating partnerships and collaborations.
- School will be able to source and serve some of their grown produce to families and students; can create a Community Supported Agriculture Partnership with other schools to create fresh market baskets. These baskets can be picked up or delivered to local families year round so we can try to decrease the amount of people facing food insecurity.

Session Team members
Arianna and Selina harvest
greens for distribution to local
families. 



THE HOW

- Work with Green Acres Urban Farm and Research Project to create training opportunities and agriculture programs at every school. Funding would be needed to create these types of opportunities to enable students and families to thrive.
- School should be able to source and serve some of their grown produce to families.
- We can create a community supported agriculture system with other schools around us.
- Teachers from other schools would have to be willing to put in time, students would have to want to participate.
- Cost can range anywhere between \$2,500-15,000 to set up a functioning greenhouse.



THANK YOU!

"When you do the common things in life in an uncommon way, you will command the attention of the world; education is the key to unlock the golden door of freedom."

- George Washington Carver

GO GREEN!

