

# **Ypsilanti District Library Garden- to-Table Program**

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## EXECUTIVE SUMMARY

Over the past year, our team of Graham Sustainability Scholars, in collaboration with the Ypsilanti District Library (YDL), was tasked with creating a robust, year-round curriculum for the library's garden-to-table program. Ypsilanti is located directly adjacent to Ann Arbor; both are within the broader Washtenaw county, and yet Ypsilanti's residents have access to significantly less opportunities than residents in places like Ann Arbor (Appendix C). In fact, Washtenaw County is one of the three poorest ranked counties in all of Michigan for inequality (Appendix D). Through this lens, our partnership has helped YDL standardize the curriculum for the garden-to-table program in order to increase food literacy and empower Ypsilanti youth through knowledge and hands-on experiences in the food and sustainability realms.

In collaboration with YDL's youth programming staff and our contact, Jodi Krahne, we were directly involved in creating a total of 16 web pages to engage youth in gardening, healthy eating, and learning about the environment and sustainability. Children and families can access these web pages online, but the pages are also meant to serve as an outline for YDL's weekly and monthly programs once the risk of COVID-19 is minimized and library operations and programming begin again in-person.

To develop these pages, our team brainstormed, discussed, and landed on eight unique and interesting topics to develop modules on. We worked both individually and in teams of two to develop a general overview of the topics with suggested videos, books, and websites people could access to learn more about the lessons. In the modules, we provided links to informational videos, developed activities, interviewed experts, and listed simple recipes. Additionally, each page has its own informational or activity-based video created by members of our team or other YDL staff. We catered our pages to children aged five to 12 (assuming they had help from an able adult) both in language and in content. We also ensured the materials needed for the recipes and activities were low cost and accessible.

We were limited both in terms of time and access, in large part because of the COVID-19 pandemic, so in the future, we recommend:

- Increasing cross organization communication (between YDL and the Graham team)
- Increasing community involvement in the programming (through interviews or guest appearances)

Overall, the garden-to-table program and the individual modules give underserved and under-resourced youth the opportunity to plant, nurture, and harvest a garden as well as learn more about sustainability and fresh, local produce. Additionally, these web pages, which are separated by season, will serve as a robust educational tool and resource for YDL staff and educators to implement the year round program going forward. Our lessons will hopefully increase food literacy, passion for learning, and equity of opportunity within Washtenaw county surrounding information about food and sustainability.

## **I. INTRODUCTION**

This project was done in collaboration with the Ypsilanti District Library, in order to develop standardized educational resources and lessons about healthy eating, food, and sustainability for their garden-to-table program. Most Ypsilanti neighborhoods, according to the Washtenaw Opportunity Index, have very low opportunity scores in health, education, job access, economic vitality, and neighborhood safety and stability (Appendix C). More specifically, many who live in Ypsilanti have limited access to healthy food and fresh produce (Appendix E). These are staggering disparities, especially considering most Ann Arbor neighborhoods score high to very high on the same opportunity index (Appendix C). Taking the extreme inequality within Washtenaw County into account, our team worked with YDL to create a curriculum that will foster enthusiasm for healthy eating, local food and produce, and sustainable habits.

Prior to the COVID-19 pandemic, the three Ypsilanti Libraries conducted their own in-person garden-to-table programming. As Graham Scholars, our project was meant to help YDL standardize the program across all locations and increase program curriculum. The pandemic stalled all in-person operations so our team developed accessible, online web pages and modules that people can engage with virtually and will serve as outlines for future in-person lesson plans.

Our team helped create 16 webpages that allow children, aged five to 12, and families to learn more about sustainability, healthy eating, and exploration of the natural environment. The modules are all linked on the main garden-to-table page which is divided into sections for easy use. All individual pages include educational background information, hands-on activities and experiments, and videos that were created by one of our team members or a member of the YDL staff. Most pages also include simple, healthy recipes. The webpages allow those who access them to learn about and partake in fun and engaging activities surrounding a diverse array of topics related to food and the environment.

## **II. METHODS**

Our 16 final webpages were created through a process of collaboration, research, and revision. The development of these web pages began with brainstorming to ensure that the modules explored interesting topics and avoided topics that were either too complicated or not robust enough to deserve their own page. Our team refined the topics and worked on the finalized ideas in groups of one or two. Each individual or small team did extensive research on the topic, creating rough drafts of the pages that included background information, activities, recipes, and engaging videos. These rough drafts were peer-reviewed by other group members, their feedback was implemented, and the drafts were sent to Jodi at the Ypsilanti District Library for feedback and approval. Finally, Jodi and the team lead, Isabel Brush-Mindell, used the

outlines to format and publish the web pages on YDL's website. Screenshots of our brainstorming sessions and web page outlines can be found in Appendix A.

When developing these pages, it was very important to keep the program's target audience in mind, specifically the age (children grades K-8, or ages five to 12) and socioeconomic status of those the library most often serves. Our background information, activities, and recipes were developed with this audience in mind.

In order to ensure our work would be able to be read and understood by our target audience, our team was mindful of the language used in the outlines. While doing research, we reworded or found simplified explanations for most of the content in order to make sure it could be understood by all. We were careful to select digestible segments of information and phrase them in a simple way. To provide more detail, most pages link to more "advanced" or related material. For example, the web page on eggs links to information on embryonic development, and the web page on reducing household waste links to the Ypsilanti Library's own webpage on composting.

In addition to the work that went into our initial web page designs, a comparable amount of planning and care went into the activities we created. We outlined each web page with an equal amount of information and interactive activities that would keep kids engaged (see example web page in Appendix B). These interactive activities took the form of drop down boxes, coloring sheets, videos, experiments, and tutorials.

Lastly, it was necessary to make sure all of the activities and experiments were accessible to the children living in Ypsilanti. Residents in Ypsilanti are typically of lower socioeconomic status and Ypsilanti is also a partial food apartheid (Appendix E). In order to plan around this, we made sure that the activities could be done with objects found around the house or with cheap, accessible materials and ingredients. After much collaboration, research, and editing we're proud of what we've been able to present to the library.

### **III. RECOMMENDATIONS**

Our collaboration with YDL resulted in the creation of a year-round curriculum, made up of a series of fully functioning webpages, for the Library's garden-to-table program. Because our project produced tangible results, our recommendations take a slightly different form than is typical. Since future Graham groups working on this project will most likely focus on implementing in-person activities rather than creating all-online content, we cannot anticipate all the specific challenges they might face. Rather, we can offer some broad recommendations for how to make learning material that engages with its target audience and ways to supplement that material with insight from experts.

In subsequent garden-to-table efforts, we recommend increasing cross-organization communication between Graham and YDL. Ypsilanti has very different demographics and its residents have access to very different opportunities than that of the Ann Arbor and U of M community. With these gaps in mind, our team recommends having a full understanding of these variations before beginning work on curriculum and increasing communication with the YDL staff about how to make content that best represents the demographics of Ypsilanti.

We also recommend fostering relationships with community experts. Our group found it challenging to reach out, connect with, and implement the voices of experts from the community because of the challenges posed by the COVID-19 pandemic. We recommend maintaining continued connections with local farms, researchers, or co-ops before, during, and after creation of garden-to-table content to cultivate lasting and amicable relationships. When selecting people to interview or plan activities with, Graham Scholars should frequently meet with YDL staff to decide which candidates would be most impactful for the target audience. Establishing connections will benefit youth served by the garden-to-table program and give them the opportunity to learn and gain perspectives from many experts as well as engage in demonstrations when in-person gatherings become feasible again.

#### **IV. ANTICIPATED IMPACT**

This project has several long lasting benefits for YDL and the greater community. First, the 16 web pages serve as an educational tool and resource that will standardize the current curriculum and provide a solid basis for the program in the future. The modules should also help increase engagement and appeal to a wide range of interests. Lastly, the modules offer a strong foundation for increasing food literacy and empowering Ypsilanti youth through hands-on learning.



These online modules will serve as an educational resource for the library and broader community. The web pages are formatted as outlines for future in-person year-long garden-to-table activities. This will allow staff to focus on enhancing existing activities, lessons, and possibly create the opportunity for more guest appearances. Additionally, they will provide a solid basis for other educators to develop lessons and interested children and families to learn about the environment and food. They are anticipated to help foster self-motivated interest in healthy eating, for those who participate in the program or explore the online modules, as well as an understanding of the impact food choices have on the environment, health, and culture.

This project will also help YDL spark interest amongst kids in a wide range of topics, primarily due to the sheer amount of available lessons. The variations among modules and the interactive components should contribute to prolonging engagement. Further, the language, chosen to be accessible for both children and adults, will encourage families to learn about these topics together.

The most important anticipated impact of this project is that it will support increasing food literacy in the local community. Food literacy is a relatively young, evolving topic. Nourish, an educational initiative, defines food literacy as “the ability to make informed choices about food that support one’s health, community, and the environment” (Appendix F). The year round curriculum our team helped develop will create a lasting impact in the form of accessible, educational opportunities. These will cultivate interest in things like planting and harvesting, seed saving, superfoods, vegetarianism, reducing waste, and the environmental impact of local food. The Ypsilanti District Library works to provide these educational opportunities to the community because they help introduce families in the area, especially youth, to these concepts. They are also often the only opportunity youth have to grow a garden, learn about it, taste the food they grew, and develop a better understanding of the local food system in the area (Appendix G). Subsequently, as kids learn through these modules, they will likely discover new interests. New interests will ensure their continued learning, whether that is through exploration of other garden-to-table modules or through independent investigations.

## V. APPENDICES

## Appendix A: In-Progress Webpages

<div> <div>YDL Programing Brainstorms</div> <div> <div>File</div> <div>Edit</div> <div>View</div> <div>Insert</div> <div>Format</div> <div>Tools</div> <div>Add-ons</div> <div>Help</div> </div> <div>See new changes</div> <div> <div>100%</div> <div>Normal text</div> <div>Times New...</div> <div>12</div> <div>B</div> <div>I</div> <div>U</div> <div>Link</div> <div>Image</div> <div>Table</div> <div>Text color</div> <div>Background color</div> <div>Indent</div> <div>Outdent</div> <div>Align left</div> <div>Align center</div> <div>Align right</div> <div>Align justified</div> <div>Link</div> <div>Unlink</div> <div>Source</div> <div>Fullscreen</div> <div>Print</div> <div>Close</div> </div> <div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> </div> <div> <div> <div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div> </div> </div> </div>	<div> <div>DIY Garden Irrigation system?</div> <div> <div>Budget/space-conscious garden creation, (creating planters out of household objects)</div> <div> <div> <div>Community gardens in the Ypsi area/Co-Ops/supportive businesses? Can we direct people to these places so they have access to resources to start a garden if they want to? (one website: <a href="https://growinghope.net/">https://growinghope.net/</a>)</div> <div>Includes home garden mentorship program</div> <div>Oh they might have this because of <a href="#">this website</a>, but can we make a kid friendly version about community gardens</div> </div> </div> <div>Why is eating local food important to combating climate change? What grows in Michigan vs far away?</div> </div> <div> <div>How are different types of food made? Ex chocolate and get a chocolate manufacturer to explain Food justice/racial justice - <a href="https://us02web.zoom.us/webinar/register/WN_Fz7M_H65RRCj0qfEPKAACA">https://us02web.zoom.us/webinar/register/WN_Fz7M_H65RRCj0qfEPKAACA</a></div> <div>Can make little boxes to pop up for each activity after information like a quiz or something to come up after each one</div> <div>You can also utilize a lot of "Learn More" buttons if they are older they might want to engage more with the extra information than others</div> <div>Meryl Ideas and outlines :)</div> <div> <div>Superfoods Curriculum</div> <div> <div> <div>Section 1(Informational) What is a superfood?</div> <div> <div>Superfood is a name for foods that are nutrient dense</div> <div>What are nutrients?</div> <div> <div>Definition: Nutrients are substances so small you can't see them that exist in food. We eat our food with these substances, and then our body processes them in order to grow, develop, and function.</div> <div>Two types of nutrients (macro and micro) and what exists under each of those categories and what they are using definitions from <a href="#">this website</a></div> </div> </div> <div>What is a nutrient dense food/superfood?</div> <div> <div>Nutrient dense means foods that are packed with many nutrients. This means, every bite you take has plenty of nutrients (macro and micro- so carbohydrates, fats, minerals, antioxidants, vitamins and more!)</div> </div> </div> </div> </div> </div></div>	<div> <div>BIOMIMICRY</div> <div> <div>People have often looked to nature for inspiration when inventing new technology in a process called biomimicry. Biomimicry is a way of creating new things where designers and engineers look to nature to see if evolution has created a way for plants and animals to solve a problem humans are trying to figure out.</div> <div>Form</div> <div> <div>   </div> <div> <div>Studying birds helped the Wright Brothers figure out some of the early problems with flight but more recently birds have been an inspiration for new high speed trains.</div> <div>These trains usually travel faster than 200 mph so they need to be very good at moving through the air with as little resistance as possible.</div> <div>Birds like the kingfisher need to be able to move incredibly quickly and quietly to catch their prey and over time they've evolved in such a way where the shape of their head and body allow them to basically cut through the air.</div> <div>Engineers have been able to look at their shape and recreate it in the nose of high-speed trains to allow them to move quickly and quietly like the kingfisher. <a href="#">This video</a> does a great job going further in depth on the story.</div> </div> </div> </div> </div>
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## Appendix B: Example Webpage

### Eggs

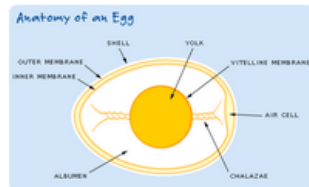
March 13, 2021

Print PDF

Eggs are interesting, versatile, and part of a healthy diet. Scroll down to learn how eggs are good for you, how baby chicks grow, and find some fun egg activities.

#### LEARN THE PARTS OF AN EGG

Before you read on, look at this diagram to learn the names of the parts of an egg. The most important ones to know for now are the yolk, the big yellow part in the center, the egg white, labeled the "albumen," and the shell, the hard outside.



### WHY EAT EGGS?

#### NUTRITION

There are five main food groups: fruit and vegetables, starchy food (bread, grains), dairy (milk, butter), fat (nuts), and protein. Eggs fall into the protein category. Why?

#### Macronutrients

Eggs are a great source of protein and fat.

**PROTEIN:** Each large egg contains 6.5 grams of protein. About half the protein is in the egg white and half is in the yolk.

Proteins are made up of building blocks called amino acids, and the body needs nine of these amino acids regularly to function. Eggs are GREAT for the body because even though they are small, they contain ALL 9 of these "essential amino acids!"

*How does protein help our bodies?*

- Our body needs protein to "build, maintain, and repair tissues in our body". Tissues are "groups of cells that work together to do a certain job in the body."
- Proteins also include many other essential nutrients needed for body function:
- Protein mainly helps build muscle, fight infections, grow strong hair and nails, and keep us full throughout the day.

**FAT:** Each egg contains 5.5 grams of fat. (% of this fat is unsaturated fat, the kind that's good for you). All of the fat is found in the yolk.

Why are fats important for the body?

They help our brain and nervous system. They support cell growth and function, they help with hormone production (hormones are chemical substances that act like messengers by traveling from one part of the body to others to help control how cells do their work), and help absorb nutrients.



MORE ABOUT EGG

• NUTRITION

LEARN ABOUT

• VEGETARIANISM

#### Micronutrients

Beyond the macronutrients, protein, eggs also contain MANY micronutrients (these micronutrients are mostly found in the yolk). Learn more about nutrients on our Superfoods page!



LEARN ABOUT

• SUPERFOODS

### CRUSHED EGG SHELLS AS A NATURAL FERTILIZER ACTIVITY

Watch this video to see us use eggshells to start growing seeds!



#### Why?

Eggshells are made up almost entirely of a chemical compound called calcium carbonate- this substance is essential (or should we say, "egg-sential") for plants to grow and thrive! Eggshells also naturally break down in soil. Once your seeds start to grow you can simply bury the eggshell into the soil with the growing plant! As the eggshells break down, they add calcium and nitrogen to the soil, which the plant absorbs and uses as it grows!

Eggshells are also a natural substance and instead of wasting them by throwing them away, you're putting them to good, environmentally friendly use!

Try the experiment on your own using [this link!](#)

**\*\*Experiment Hack:** Use a butter knife to gently open egg shells at the top so that your egg can hold the soil better!

### HOW CHICKS DEVELOP

Baby chicks typically grow inside their eggs for 21 days until hatching. The chick inside is called the embryo. The embryo grows bigger and bigger every day.

The embryo floats in liquid called amniotic (am-nee-AH-tik) fluid and eats the yolk, or vitellus, to grow.

The albumen is a white layer that surrounds the embryo and amniotic fluid to keep the chick warm and snug.

After the 21 days have passed, the baby chick is ready to hatch! It knows how to all by itself.

Baby chicks grow a special hard tip on their beak called the egg tooth that helps them break through the hard egg shell.

Remember, the eggs you buy from the store do not have baby chicks in them. The yolk in our eggs was produced in case a baby chick was created (a process called fertilization), but the chick never came. Watch "Are Miss Pauletta's Eggs Fertile?" to see how farmers tell if an egg is fertilized!

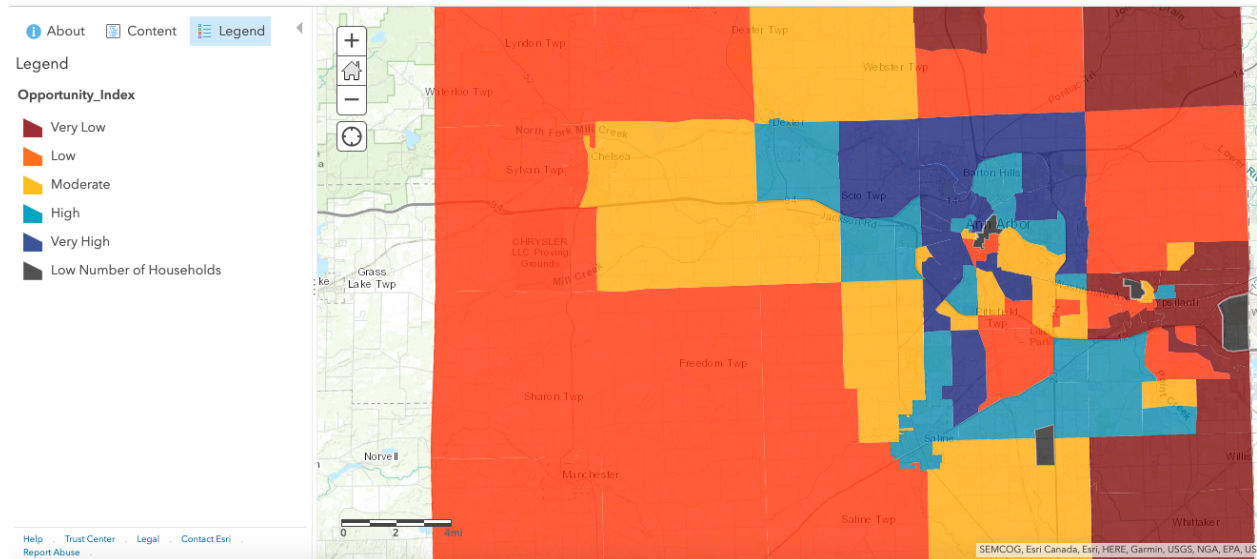


See full website [here!](#)



## Appendix C: Washtenaw Opportunity Index

Washtenaw Opportunity Index. Washtenaw County,  
[www.opportunitywashtenaw.org/opportunity-index.html](http://www.opportunitywashtenaw.org/opportunity-index.html).



## Appendix D: Causes of COVID-19 Disparities in Washtenaw County

Simon, Jeremiah. *Racism: The Root Cause of COVID-19 Disparities in Washtenaw County*. University of Michigan School of Public Health, 8 July 2020, [sph.umich.edu/pursuit/2020posts/racism-the-root-cause-of-covid-19-disparities-in-washtenaw-county.html](http://sph.umich.edu/pursuit/2020posts/racism-the-root-cause-of-covid-19-disparities-in-washtenaw-county.html).

## Appendix E: Food Access Disparities Between Ann Arbor and Ypsi

Durr, Matt. *'Vast' Divide in Grocery Store Options in Ann Arbor and Ypsilanti*. MLive, 13 Aug. 2015, [www.mlive.com/business/ann-arbor/2015/08/ann\\_arbor\\_ypsilanti\\_mayors\\_wei.html](http://www.mlive.com/business/ann-arbor/2015/08/ann_arbor_ypsilanti_mayors_wei.html).

## Appendix F: What is Food Literacy?

Nourish. "What Is Food Literacy? ." *Nourish: Food + Community*, WorldLink, 2021, [www.nourishlife.org/about/what-is-food-literacy/](http://www.nourishlife.org/about/what-is-food-literacy/).

## **Appendix G: Original Project Description**

Are you passionate about helping youth and families improve their lives by learning about healthy food and sustainable gardening? Do you want to make a lasting impact in an underserved community? The Ypsilanti District Library is looking for a team of Graham Sustainability Scholars to develop a year-round curriculum we can use to educate families. Community gardens at three library locations provide hands-on gardening experiences where families learn more about planting, harvesting, and cooking at library workshops. In a country where it's cheaper to buy processed food than local produce, the library educational opportunities are often the only chance youth, especially those from under-resourced families, have to plant a garden, watch it grow, and taste what they grew.

While Ypsilanti is near Ann Arbor and is accessible by AAATA bus, there is a great disparity between the schools and income levels of families across Washtenaw County. Washtenaw County has some of the highest levels of racial, health, economic, and educational disparities in the country. In the summer, we work with Food Gatherers to serve free lunch, which we follow with garden-to-table programs and YMCA fitness classes. During the school year, we host monthly classes that teach kids healthy cooking, sometimes with food from the garden or farmers' market. Each library location currently creates individual lesson plans for these programs. Staff need to plan ahead to ensure they plant what is needed for summer cooking classes and connect with community experts such as Growing Hope or local beekeepers to supplement what kids learn about gardening and food. To improve our garden-to-table programs, Graham Scholars will work directly with library staff to develop a year-round curriculum that can be used at all locations that not only introduces families to planting and harvesting, but incorporates composting, seed saving, the environmental impact of eating local food, education about opportunities at the Ypsilanti Farmers' Market to get reduced prices on local produce, and more.

Scholars will learn to assess needs by Observing all three libraries and gardens; identifying and interviewing local experts from universities and nonprofits who might serve as future presenters; writing lesson plans that incorporate books, writing and art activities, and STEM concepts; implementing at least one garden-to-table program; and preparing the garden for the spring and summer growing seasons. This project may appeal to (but is not limited to) students interested in the fields of education, public health, nutrition, environmental sustainability, literature, arts, life sciences, social sciences, and social work. Useful skills for team members to succeed in this project include cross-cultural competency, community engagement, project management, event planning, facilitation, and marketing/outreach.