



Chew On This: Environmental Racism and Food Justice

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*This curriculum unit is recommended for:
World History, 9th-12th Grade*

Keywords: Environmental Racism, Racism, Food Justice, Injustice, Climate Change, Pollution,

Teaching Standards: See [Appendix 1](#) for teaching standards addressed in this unit.

Synopsis: In this unit, students will examine environmental racism and food justice through the lens of the effects of climate change and climate issues. Students will focus on looking at what environmental racism is, whom it effects, and what is being done to address the situation. They will analyze and evaluate data on the realities of environmental racism in the Unites States and in Charlotte, North Carolina. Students will also examine the effect on food insecurities and evaluate the movements taking place to help address those issues. At the end of the unit, students will create their own service project in order to help the community address some of those issues. They will pick an area of focus and research ways in which students, the school and community can help improve these issues.

*I plan to teach this unit during the coming year to 93 students in **High School World History**.*

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Introduction

In our seminar, Climate Refugee Stories, we looked at how climate change is impacting and forcing migration among various groups of people. We have been able to look at the implications of climate change and how it has changed and will continue to change the way humans and the environment interact. One interaction that our World History class focuses on every year is how human's relationship with food has changed over time and its overall impact on the environment.

My students can connect on so many levels with food. They discuss with me their favorite foods, what they had at lunch, or the newest snack they picked up. They discuss the recipes passed down from their grandparents that they ate for dinner last night. They give me so much insight into their likes, culture, and lives. I want students to be able to take one of their favorite topics and dive deeper into the effects of food on climate change and learn about food justice and environmental racism- something many are not familiar with but are affected by. Many of my students are under-represented in the history we teach and the cultures we talk about. They are not included in the conversations surrounding the deep impact of climate change, food justice, and environmental racism. Many can make connections to the issues impacting their community. When students connect with and care about the impact of the content, they are more willing to participate and engage with the content. Within this unit, I will encourage them to take action to create a positive change in their lives and community. They will start by examining environmental racism- what it looks like and who it affects and will dive deeper into understanding how it impacts their community. Then, they will look at a branch of that racism through looking at food justice. They will review what it is and also who it effects. In the end, they will take that knowledge and apply it to creating a service project to help improve their community.

Rational

Ever since I started teaching World History, I have always focused on European history and the impacts of the industrial and agricultural revolution mostly on Great Britain and the United States. Very rarely did I have the time or opportunity to focus on climate and current food production in relation to things like food justice and environmental racism. I wanted to shift my focus when teaching human and environment interaction to connect current issues to historical ones. I want to focus on issues that are centered around the issue of climate change and the people who are effected most. I wanted to incorporate something that was relevant to my students and something that would encourage them to get involved. If students are able to learn about a topic that is directly related to them, they find more interest in it. They tend to want to do more research into the topics and they want to be solution oriented to push for a better future.

The focus of this unit is to have students examine food justice and environmental racism and look at solutions to the issues, particularly in Charlotte. Food justice is allowing all people to have access to healthy and affordable food and environmental racism has to do

with the effects of pollution and climate change disproportionately effecting people of color. They will learn about the history of both food justice and environmental racism and how they have progressed over time. They will analyze why these problems exist and research how they have impacted specific communities. We will take this larger global and historical issues and break them down to local issues. They will research solutions to the issues and movements in place to address these issues. Ultimately, students will create their own service project that informs the community about climate change, food justice, and environmental racism. They will focus on building sustainability and finding ways to support projects within their community.

School Demographics

I teach at Mallard Creek High School in Charlotte Mecklenburg Schools in northeast Charlotte. It has over 2,400 students- 67% African American, 12% white, 12% Hispanic, 5% Asian and 4% Multi-Racial and serves grades 9-12. The classes I teach tend to be majority African American averaging about 80%. The school has about 40% of students on free or reduced lunches, which reflects the socio-economic status of the students. Mallard Creek is a large mix of wealthy and middle-class students with some students being homeless. I teach two honors courses and one standard that total 91 students. I have students that vary in reading ability from 4th grade to 12th grade. This unit is intended to fit the population of students I teach. As I have mentioned, I want students to see themselves and own their history. Many of my students, most of whom are African American, do not get to see themselves or their history in school. With this unit, they will get to see how people of color are directly impacted and disproportionately impacted by climate change issues. However, they will also get to be creative with how they can address solutions to these issues. This allows them to feel empowered. I created these lessons to give those students ownership over their history and make greater connections to what matters to them. It also allows my other students to see different perspectives. When my students see relevance in the curriculum, they are more engaged and are more curious about exploring more about the topic.

Objectives

For the exact language of the North Carolina Standard Course of Study standards addressed in this unit, please refer to Appendix I. By the end of this unit, students will be able to identify the origins and history of food justice and environmental racism and analyze the impact to ultimately create a sustainable solution. They will use evidence from primary and secondary sources to evaluate the impact of environmental racism. They will also evaluate the impact of the food justice movement and research sustainable solutions to those issues. They will do this through creating their own service project that reinforces sustainability in their own community.

Content Research

Climate change has been a growing concern for many years. In the most recent years, it has become one of the biggest concerns across the globe. There have been different initiatives from government policy to grass-roots movement to slow the current trends of climate change. For many, this is a newer crisis, something they can only imagine the long-term effects of but for many others, this has been a crisis for decades. Climate change has been disproportionately affecting people of color and there has been a fight for decades to help combat the environmental injustices. People of color are routinely exposed to poor air quality, waste sites, and poor drinking water at a higher rate than white people. This is the injustice that many are fighting against. But it doesn't just stop at environmental exposure. People of color are also disproportionately affected by food insecurity and lack of access to healthy and affordable food. There is a movement in place called food justice to help address these issues. Both environmental racism and food justice stem from the biggest issue of climate change and add to the growing issue of migration due to climate and climate change related problems.

Environmental racism is not as widely known as it should be it. It has existed long before climate summits and government reports. It has mostly quietly effected generations of people of color. However, it has come to more to the forefront of injustice and inequality conversations. But, what is environmental racism? What does it look like around the country?

According to Robert D. Bullard, "Environmental racism refers to environmental policy, practice, or directives that affects or disadvantages (whether intended or unintended) individual groups, or communities based on race or color".¹ To put it simply, people of color are put at a higher risk to environmental threats than other groups, intentional or not. Environmental racism is a form of systematic racism that is built into government institutions, also known as institutional discrimination. Institutional discrimination is "actions or practices carried out by members of dominant (racial or ethnic) groups that have differential and negative impacts on members of subordinate groups".² Because environmental racism is built into the system, it means that any government institution intervention will tend to have bias in policies.

This racial bias is also reflected in companies and corporations that perpetuate the racism and are to blame for many of the environmental threats that affect people of color. Bullard mentions, "The American economic engine has generated massive wealth, a high standard of living and consumerism. This growth machine had also generated waste, pollution and ecological destruction".³ The companies that drive the high consumerism tend to have higher pollution and waste levels and are the driving force behind climate change. While the government does have regulations in place, it does not inherently protect all

¹ Robert D. Bullard, "Confronting Environmental Racism in the 21st Century." *Race, Poverty & the Environment*, vol. 10, no. 1, 2003, pp. 49–52.

² Bullard, "Confronting Environmental Racism in the 21st Century", 50.

³ Bullard, "Confronting Environmental Racism in the 21st Century", 49.

groups or areas the same.⁴ This goes back to racism that has been built into the system, which creates the regulations. Ultimately, these two factors have caused and allowed environmental racism to exist.

To better understand environmental racism, it begs the question of what does it look like? Whether it is a reference to the destruction of native people and their land and water like at Standing Rock, or the lead filled water of Flint, Michigan, a majority Black city. Environmental racism comes in many different forms. “People of color around the world must contend with dirty air and drinking water, and the location of noxious facilities such as municipal landfills, incinerators, hazardous waste facilities owned by private industry, government and even the military”⁵, there are numerous examples of environmental racism all over the world, and Bullard points out a few in his work,

“The struggle of African Americans in Norco, Louisiana and The Africans in the Niger Delta are similar in that both groups are negatively impacted by Shell Oil refineries and unresponsive governments. This scenario is repeated for Latinos in Wilmington, California and indigenous people in Ecuador who must contend with pollution from Texaco oil refineries. The companies may be different, but the community complaints and concerns are very similar. Local residents have seen their air, water, and land contaminated. Many nearby residence are “trapped” in their communities because of inadequate roads, poorly planned emergency escape routes and faulty warning systems. They live in constant fear of plant explosions and accidents”⁶

These are just a few examples of people of color who are affected by big corporations and poor government intervention that has helped environmental racism to thrive. As stated earlier, these examples are not new, in fact there are plenty throughout history. Environmental racism has had a deep history embedded into the core of American history.

The history of environmental racism can actually be traced back to colonialism. It continued on from there to the reconstruction period in the United States. It began in the United States with indigenous population. In the 1800s, the indigenous population was forcibly removed from their land and taken to specific sections of the United States. Author Carolyn Merchant argues that the beginning of the impact of environmental racism for Native Americans can be traced back to the 1964 Wilderness Act.⁷ This was the basic idea of the government preserving wilderness but not for the Native Americans but rather lands that people can visit. This was for the benefit of white visitors to the land, which left native populations harmed, away from land they held sacred, and eventually needed to fight to continue to have what little land they have left preserved. Much of the land has been taken

⁴ Bullard, “Confronting Environmental Racism in the 21st Century”, 50.

⁵ Bullard, “Confronting Environmental Racism in the 21st Century”, 50.

⁶ Bullard, “Confronting Environmental Racism in the 21st Century”, 51.

⁷ Carolyn Merchant. “Shades of Darkness: Race and Environmental History.” *Environmental History*, vol. 8, no. 3, 2003, p. 380., <https://doi.org/10.2307/3986200>.

advantage of and used for capitalistic gains without regards to the effects, like the Keystone Pipeline. The Keystone Pipeline was made to transport oil from Canada through Native lands into the United States.⁸ The whole purpose of the pipeline was financial gain and to lessen dependence on foreign oil.⁹ With that, the government was willing to take land for their own profit away from natives and impact their source of water.

For African Americans, Merchant traces it back to the slave system in the United States. She states, “The slave system caused both destruction of Black bodies and the rapid degradation of southern soil, as tobacco, rice, sugar, and cotton became cash crops in an expanding world market.”¹⁰ Not only were Black people and their health negatively affected by slavery but the health of the land as well. The negative history of the treatment of Black people and people of color has built into the system and has caused larger issues to occur. It is evident through the issues people of color are currently facing from climate change as well.

Another issue that stems from climate change and environmental racism is food justice. Food justice is defined as, “justice for all people in the food system.”¹¹ This, again, tends to disproportionately affect people of color. There has been a growing fight to have all people, regardless of race or income, to have access to healthy and affordable food. There have been initiatives across the country and world, but it is still an issue for millions of people. According to foodprint.org, “People of color are the most severely impacted by hunger, poor food access, diet-related illness and other problems with the food system. The food justice movement works not only for access to healthy food for all, but also examines the structural roots of these disparities — and works for racial and economic justice, too.”¹² Food justice is the movement to help improve accessibility of healthy food but looking into the deeper, systematic causes for the inequalities that exist in regards to access to food and a healthy life style.

Food insecurity, hunger, and inaccessibility to healthy food are all a part of the fight for food justice movement. These are by no means new concepts and have effected people across the globe for years. However, the past few years with the increase in climate change has exacerbated the issue to record levels, “The global food price crisis of 2008 ushered in record levels of hunger for the world’s poor” and in the United States, “the levels of food insecurity mirror global patterns; more than 50 million people are now food insecure and

⁸ Cherry, Courtney. "The Keystone Pipeline: Environmentally Just." *Envtl. & Energy L. & Pol'y J.* 6 (2011): 125.

⁹ Parfomak, Paul W., Robert Pirog, Linda Luther, and Adam Vann. "Keystone XL pipeline project: Key issues." (2013).

¹⁰ Merchant, “Shades of Darkness: Race and Environmental History”, 383.

¹¹ Melanie Pugh. “A Recipe for Justice: Support for a Federal Food Justice Interagency Working Group.” *Food and Drug Law Journal* 72, no. 2 (2017): 341–60.

¹² “Making Sense of Food.” *FoodPrint*, 10 Nov. 2020, <https://foodprint.org/>.

one in 9 Americans are on food stamps.”¹³ These issues, however, disproportionately affect people of color.

This is true across the globe and in the United States. This includes the issues that arise with lack of access to food and healthy food, “Food insecurity in the United States is characterized by a nationwide epidemic of diet related diseases that result in an estimated \$240 billion a year in health costs that fall disproportionately on low-income communities of color. In these neighborhoods, food access is often limited to cheap, high-fat, high-salt, high-calorie, processed food available at gas stations, liquor stores, corner stores, and fast food outlets.”¹⁴ Communities of color are facing and have been facing these issues at a higher rate and not only does it impact food security but also health issues.

This movement to push for accessible and healthy food has been driven by the inequalities that communities of color have been experiencing for years. It is cited that the food justice movement emerged from the fight for environmental justice.¹⁵ Similar to environmental racism the conversations about food justice revolve around the “context of institutional racism, racial formation, and racialized geographies.”¹⁶ The food injustices faced by communities of color are built into the system.

The food justice movement has been established more recently but has roots tracing back to the Black Panthers and the reform they asked for. Their platform used the statement, “we want land, bread, housing, education, clothing, justice and peace.”¹⁷ This, in part, was to address systematic racism that has been embedded into societies for generations. They did make it a point to specially address the food issues. The movement continues to incorporate the fight for food justice as well as overall social change. Gimenez and Wang, authors of *Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement*, “The food justice movement confronts both the effects of structural racism on the ground and the failure of the dominant social change paradigms to take structural racism into account. Its discourse invokes the notion of a grassroots-driven transition to a more equitable and sustainable food system.”¹⁸ Typically, this movement has been working from the ground up

¹³ Holt-Giménez, Eric, and Yi Wang. “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.” *Race/Ethnicity: Multidisciplinary Global Contexts*, vol. 5, no. 1, 2011, pp. 83–102., <https://doi.org/10.2979/racethmulglocon.5.1.83>.

¹⁴ Gimenez and Wang, “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.”, 84.

¹⁵ Gimenez and Wang, “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.”, 88.

¹⁶ Gimenez and Wang, “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.”, 88.

¹⁷ Gimenez and Wang, “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.”, 89.

¹⁸ Gimenez and Wang, “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.”, 89.

with citizens, specially people of color, who are fighting for food justice and food security within their own communities.

The food justice and environmental racism movements have origins in North Carolina as well. According to Gimenez and Wang, “The tipping point occurred in 1982, when a hazardous waste facility began construction in Warren County, North Carolina which was ‘poor, rural, and overwhelmingly black’. Protestors physically blocked the trucks from carrying waste to the new facility by lying in the street and marching”¹⁹ It is this stand

¹⁹ Melanie Pugh. “A Recipe for Justice: Support for a Federal Food Justice Interagency Working Group”, 343.

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https://www.learningforjustice.org/classroom-resources/lessons/analyzing-environmental-justice?_sm_au_=iVV2vkSJVFM3HNMj6kkGkK0L1KKKp.
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that set off a shockwave of fighting for environmental and food justice for people of color around the United States.

It is incredibly important to note the embedded and deep rooted racism that people of color experience here and around the world. Without acknowledgement or understanding about the disproportionate negative environmental impacts people of color are facing are dealing with, not much would be done. But, movements are taking place to help combat these and other issues associated with climate change. Most movements are taking place at the grassroots level but it is important to continue to educate on all levels.

General Teaching Strategies

Any of the materials in the curriculum unit can be used in a remote learning environment. Given the state of affairs in 2021, this can all be done electronically. However, these activities and strategies can be used and adapted for an online or in-person lesson.

Anticipatory Guides and Inquiry

At the beginning of each unit, teachers should assess how much prior knowledge a student has on the content and information being taught. This way the teacher is able to not only start to individualize instruction but they can use that information to help build upon the curriculum and instruction fit for their classes. It can also be used as a discussion piece later on when looking at what students have learned throughout the lesson. You can have

https://www.foodspan.org/lesson-plans/unit-3-consumers-and-communities/index.html?_sm_au_=iVV2vkSJVFM3HNMj6kkGkK0L1KKKp.

“Food Justice.” *PBS LearningMedia*, GBH, 9 Feb. 2021, <https://wtvi.pbslearningmedia.org/resource/envh10.sci.ess.watcyc.foodjustice/food-justice/>.

Holt-Giménez, Eric, and Yi Wang. “Reform or Transformation? the Pivotal Role of Food Justice in the U.S. Food Movement.” *Race/Ethnicity: Multidisciplinary Global Contexts*, vol. 5, no. 1, 2011, pp. 83–102., <https://doi.org/10.2979/racethmulglocon.5.1.83>.

“Making Sense of Food.” *FoodPrint*, 10 Nov. 2020, <https://foodprint.org/>.

Merchant, Carolyn. “Shades of Darkness: Race and Environmental History.” *Environmental History*, vol. 8, no. 3, 2003, p. 380., <https://doi.org/10.2307/3986200>.

Pugh, Melanie. “A Recipe for Justice: Support for a Federal Food Justice Interagency Working Group.” *Food and Drug Law Journal* 72, no. 2 (2017): 341–60.

Parfomak, Paul W., Robert Pirog, Linda Luther, and Adam Vann. “Keystone XL pipeline project: Key issues.” (2013).

students analyze what they learned, how they learned it, and reflect on what might have made them successful in the unit or what they want to work on and learn more about.

Close Read

Whenever students are given a reading, it is good to provide strategies and questions along with the text to help students understand what they are reading. This will help guide them in the reading and help them think critically about the content in the passage. It is also good to chunk the reading into sections so it does not become overwhelming for them. Teachers can also provide a vocabulary reference sheet to help lower level readers. You can turn it into bigger lessons with pairs or small groups. You can model the close reading using the reading guide so students can learn how to think about their reading, and think about how they learn when reading a passage. The idea is to have them engage with the text and connect to the material.

Reading Guides/Organizer

Each time students are given an assignment during this lesson, they are given some sort of guide or organizer to help them organize all of their ideas and information from the source or lesson. Through guides and organizers, the teacher is able to observe student learning and how students are doing with the activities. It also allows students to keep track of the work they have done for each lesson and can reference that work in later lessons.

Lessons/Activities

Activity #1: Introduction/Anticipatory Guide/Inquiry about Environmental Racism adapted from Learning for Justice

In the first activity, students will be given a map that exemplifies environmental racism. Without discussing first, students will study the map and complete a “see, think, wonder” that gets them thinking about what is being shown and starts a conversation about the topic. Then the students will examine different graphs that relate pollution and income. They will answer questions to help them analyze the graph and then write a summary about the relationship to the environmental racism discussed in the first activity. Lastly, students will examine the impacts of pollution in Charlotte, North Carolina using the website and data and analyze the local impacts by answering the guiding questions.

<https://www.learningforjustice.org/classroom-resources/lessons/analyzing-environmental-justice>

Activity #2: Read and React Environmental Racism adapted from Zinn Education Project

In the second activity, they will read the Zinn Education Project article about environmental racism. They will fill out a reading guide that will help them break down the words and concepts from the article. It will enhance their understanding of environmental racism and its significance. Once students complete the reading guide, students will create a reaction piece to how they feel/what they think about environmental racism. This will be a choice activity.

<https://www.zinnedproject.org/materials/big-red-dot-environmental-racism>

Activity #3: Introduction/Inquiry about Food Justice and connection to Environmental Racism Lesson adapted from foodspan.org

In the third activity, students will go over food justice and start by discussing the hunger gap and food insecurity. They will get a brief overview with the slides that will spark a discussion about the topic. Then students will look at food availability. First they will do some research about their own area, finding out what is available near them. Then they will analyze three maps in the Baltimore area and answer questions about each location.

Activity #4: Activity and Case Study about Food Justice Lesson adapted from PBS

In the fourth activity, students will look at a case study of food justice. They will look at a video created by high school students that highlights food justice in their community and how they look to address the issues. Students will engage in discussion questions before the video and then reflect on the solutions proposed in the video by those students. Lastly, students will complete their own research on movements taking place locally.

<https://wtvi.pbslearningmedia.org/resource/envh10.sci.ess.watcyc.foodjustice/food-justice/?student=true>

Activity #5: Service Project Assignment and Activism Research

In the last and final activity, students will work on creating and designing a service project. Students will use the provided links to help them research different local organizations and what their missions are. They will use these to help them design their own service project that could take place around the community to help some of the issues and even partner with some local organizations. They will be required to create a project proposal that includes all the details and create an information graphic or pamphlet to help inform about their issue they chose.

Assessments

Formative Assessment(s):

For the formative assessment, students should do a quick write daily to review information they learned that day or the day prior. They can keep the quick write as a reference and support for lessons.

Teachers can also view the guides and activities provided for each lesson to gauge how the students are doing and that they are learning for each activity. If students are put into groups, the teacher can observe the conversations.

The teacher can also use the in-class discussion to the question provided to gauge what students have learned in each lesson and what students include with their organizers. They could grade based on participation.

Summative Assessment: The summative assessment would be the last activity of the Service Project. This would require students to have a great deal of background knowledge to complete the activity in a proficient manner. A rubric is provided.

Appendix I: Teaching Standards for North Carolina Course of Study

WH.G.1- Understand how movement has influenced societies now and in the past

- Students will analyze environmental racism and issues of food justice through various activities and sources to help them determine the bigger issue of forced migration because of those factors.

WH.G.1.1- Explain the reasons for and effects of immigration, forced migration, slavery, and settlement on empires, societies, and indigenous populations around the world, now and in the past.

- Students will look at various groups of people in Charlotte and other parts of the world to analyze the effects of climate change, environmental racism, and food justice and evaluate the impact on those populations.

WH.G.1.2- Distinguish the relationship between movement, technology, and innovation in terms of cultural diffusion on societies around the world, now and in the past.

- Students will read about and interpret the relationship that humans have with different groups and the planet. They will determine why specific groups are disproportionately targeted and effected and how that has affected them overtime.

WH.G.2- Analyze the intentional and unintentional consequences of human-environment interaction.

- Students will look at how humans have adapted and impacted the environment through air pollution and determine the different consequences for those actions.

WH.G.2.1- Deconstruct the relationship between geopolitics and demographic shifts in terms of intentional and unintentional consequences now and in the past.

- Students will look at how race and socioeconomic status have played a part in environmental racism and food insecurity issues. They will look at the impact of people of color and their local community.

WH.G.2.2- Differentiate technological innovation and human-environment interaction in terms of intentional and unintentional consequences now and in the past.

- They will examine how things like factories and their locations have played a part in environmental racism and how access to stores had influenced food security.

Appendix II: Teacher Resources

Google Classroom or another online platform to post material

- a. Google classroom requires a free account
- b. Google slides can be helpful to project and display the information
- c. Google documents can be used for each activity.

Learning for Justice

This is a free resource but teachers can join and create an account. This will give to access to the lesson in its entirety. The lesson in this unit was adapted from this resource.

<https://www.learningforjustice.org/classroom-resources/lessons/analyzing-environmental-justice>

Clean Air Carolina

This requires access to a computer and internet to display the information gathered from the Clean Air Carolina to examine the impacts of pollution locally. It includes graphics, images, and maps.

<https://storymaps.arcgis.com/stories/5071792639ef47729fad54da835d37d3>

Zinn Education Project

This requires a free account that can be access with an email. This will allow teachers to access the reading and other lessons. This is the reading used with the reading guide.

<https://www.zinnedproject.org/materials/big-red-dot-environmental-racism>

Foodspan.org

This is a free educational resource. It has various lessons already set up by John Hopkins University. This is the lesson that was adapted to create the food justice lesson.
<https://www.foodspan.org/lesson-plans/unit-3-consumers-and-communities/index.html>

PBS Food Justice

This is a free educational resource that teachers can sign up and assign lessons directly. This lesson is adapted to create the food justice case study lesson.
<https://wtvi.pbslearningmedia.org/resource/envh10.sci.ess.watcyc.foodjustice/food-justice/>

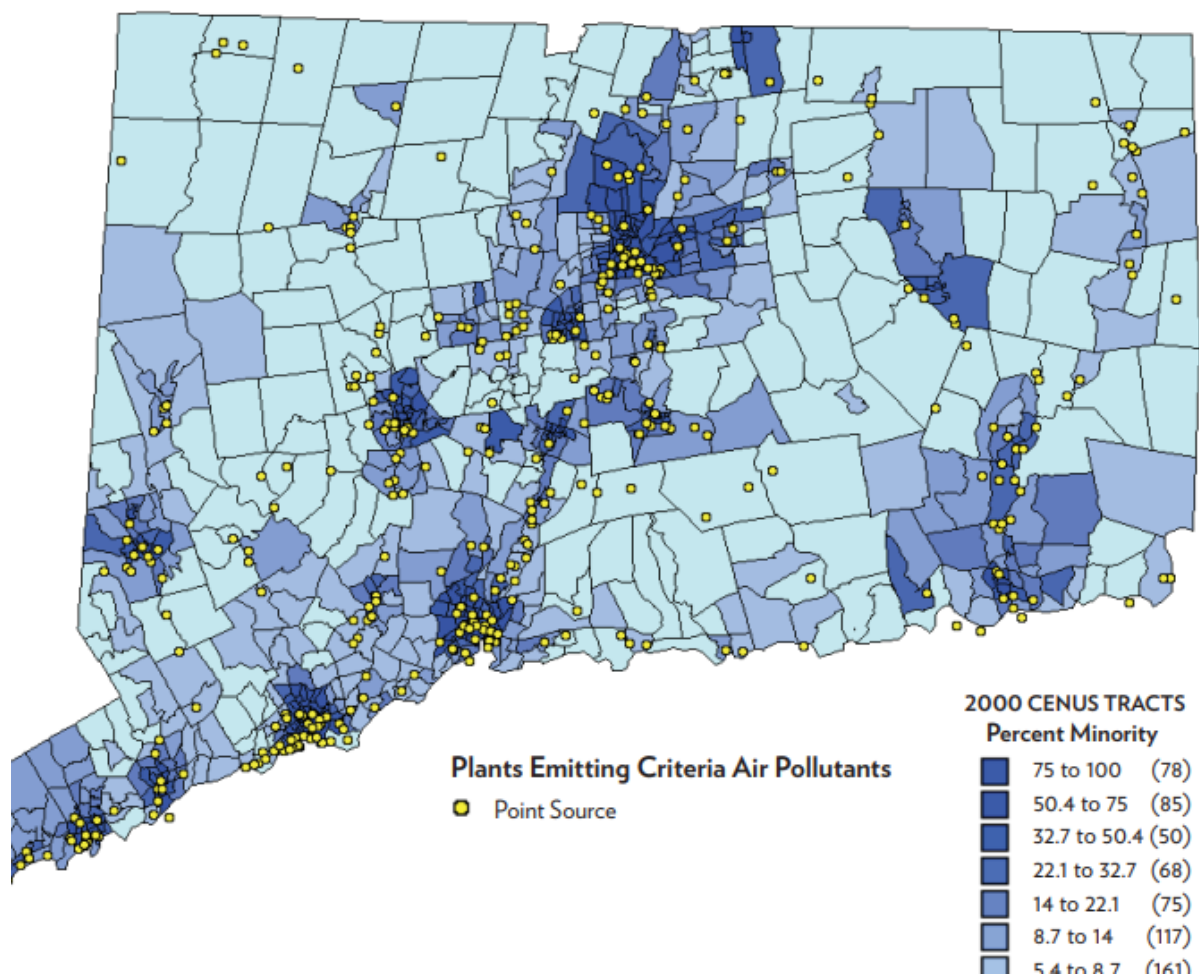
Appendix III: Lesson Materials

Activity #1.1 Anticipatory Guide and Inquiry Lesson

Directions: Using the image provided, complete the see, think, wonder.

Environmental Racism...What is it?

2000 CENSUS TRACTS PERCENT MINORITY AND PLANTS EMITTING CRITERIA AIR POLLUTANTS

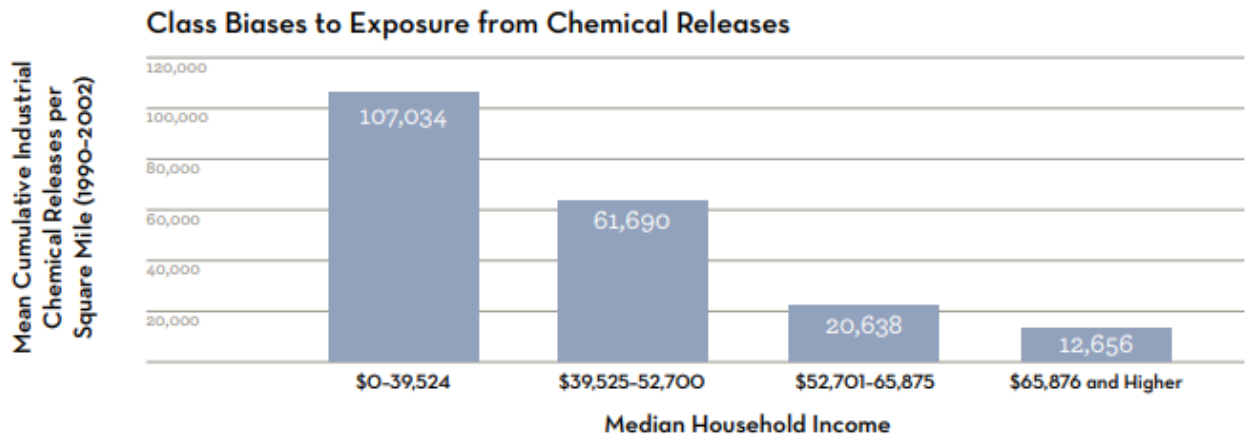


I See.....(make 3 observations about the image)	I think....(what do you think is happening?)	I wonder...(2 questions you have about the image)
1. 2. 3.	I think.....	1. 2.

Activity #1.2 Graph Analysis

Pollution Graph Analysis

Graph 1: Exposure to Chemical Releases According to Income



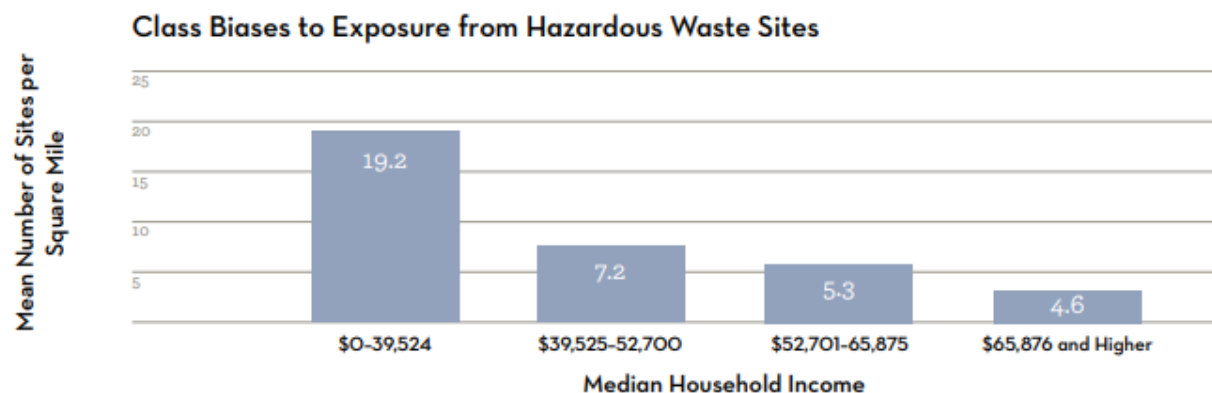
Questions:

1. What is the graph showing?
2. What is measured on the X axis?
3. What is measured on the Y axis?
4. How does this show class biases in regards to exposure to chemical releases?

Summary:

1. In 3-5 sentences, summarize what this tells us about environmental racism.

Graph 2: Exposure to Hazardous Waste Sites According to Income



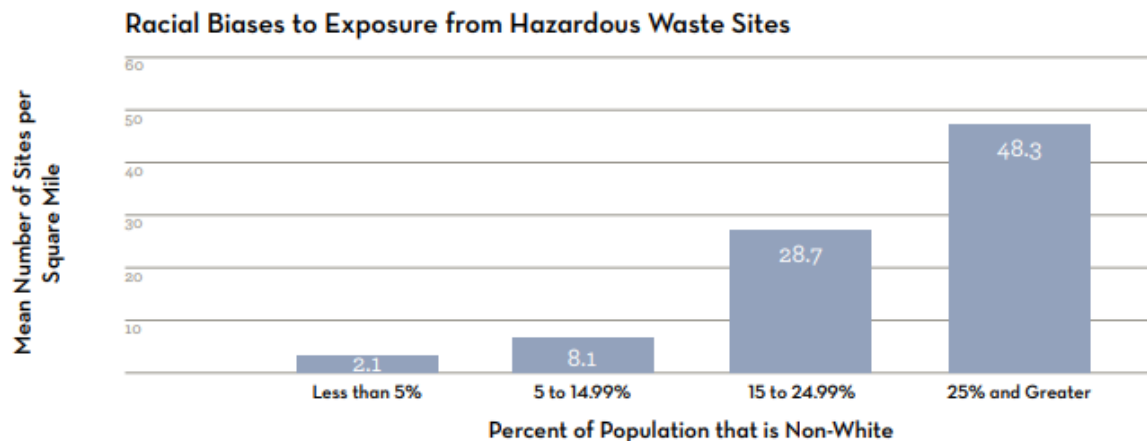
Questions:

1. What is the graph showing?
2. What is being measured on the X axis?
3. What is being measured on the Y axis?
4. How does this show class bias in regards to exposure from hazardous waste sites?

Summary:

1. In 3-5 sentences, summarize what this tells us about environmental racism.

Graph 3: Exposure to Hazardous Waste Sites According to Race



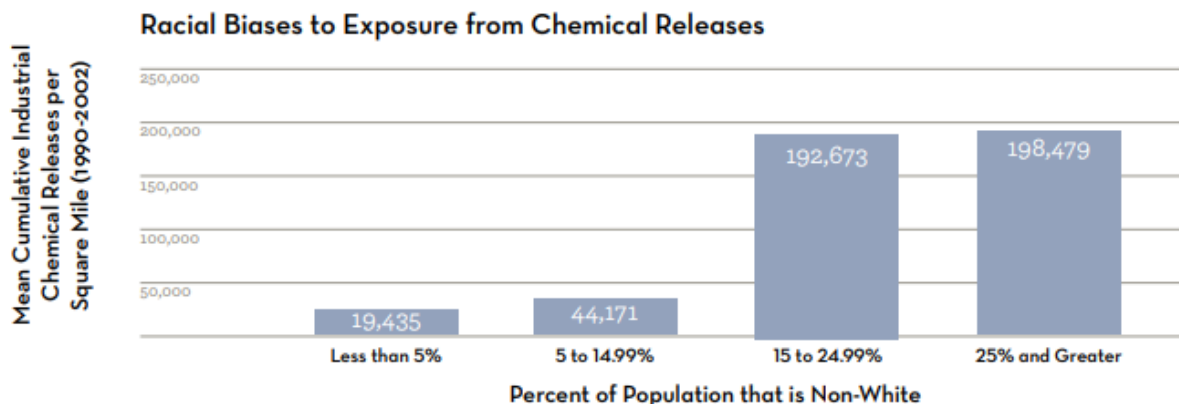
Questions:

1. What is the graph showing?
2. What is being measured on the X axis?
3. What is being measured on the Y axis?
4. How does this show class bias in regards to exposure from hazardous waste sites?

Summary:

1. In 3-5 sentences, summarize what this tells us about environmental racism.

Graph 4: Exposure to Chemical Releases According to Race



Questions:

1. What is the graph showing?
2. What is being measured on the X axis?
3. What is being measured on the Y axis?
4. How does this show class bias in regards to exposure from hazardous waste sites?

Summary:

1. In 3-5 sentences, summarize what this tells us about environmental racism.

Activity 1.3 Charlotte Website Analysis

Directions: Use the website to help answer the questions below.

Pollution and Environmental Racism In Charlotte		
https://storymaps.arcgis.com/stories/5071792639ef47729fad54da835d37d3		
Reading Sections	Questions	Reactions/Thoughts/Questions
Tale of Two Neighborhoods Historic West End Myers Park/Dilworth	<ol style="list-style-type: none"> 1. What is the “tale of two neighborhoods”? 2. How is Historical West End different from Myers Park and Dilworth? 	
Defined by a History of Segregation Historic Redlining Placement of highways and railroads	<ol style="list-style-type: none"> 1. What is segregation? How is it seen in these neighborhoods? 2. Looking at the hand-drawn map: what do you notice? 3. What do you notice about the roads and their placement? 	
What you breathe depends on where you live NATA Traffic Proximity Index Air pollution sites	<ol style="list-style-type: none"> 1. What does “What you breathe depends on where you live” mean? How is it significant? 2. What does the west end have a high concentration of? 	
“Public Health Priority Area” Residents Respond Hyper-local, real-time data collection Where we monitor	<ol style="list-style-type: none"> 1. What can pollution do to the body? 2. What did the residents do? 3. Who leads the fight for clean air? 	
Air (E) Quality West End Green District Air monitoring Reduce Transportation Emissions Clear Construction Equity Focused Permitting and Zoning	<ol style="list-style-type: none"> 1. Why is the community important? 2. What can the data help with? 3. What does the community want to establish? Why? 	

Community Benefits Agreements Green Infrastructure and Tree Planting Statewide Issue	<ol style="list-style-type: none"> 1. What is the Community Benefit Agreement? 2. What are they doing to combat the pollution? 	
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Activity #2.1 Zinn Education Project Article with Read and React

Zinn Education Project

[Link to Reading](#)

Reading Guide: The Red Dot of Environmental Racism	
Section/Page	Summary
Pages 1 and 2	<ul style="list-style-type: none"> • Three Sentence Summary: <ul style="list-style-type: none"> • • • • Key Vocabulary Words: <ul style="list-style-type: none"> • • Questions:
Page 3	<ul style="list-style-type: none"> • Three Sentence Summary: <ul style="list-style-type: none"> • • • • Key Vocabulary Words: <ul style="list-style-type: none"> • • Questions:
Page 4 and 5	<ul style="list-style-type: none"> • Three Sentence Summary: <ul style="list-style-type: none"> • • • • Key Vocabulary Words: <ul style="list-style-type: none"> • • Questions:

Reaction Choice Activities

1. Create a poem that sheds light on how you think/feel/understand about environmental racism. Must be at least 5 lines.

2. Create a piece of artwork, this could include a drawing, comic strip, or interpretive piece. Must include color.

3. Create a journal entry to discuss your thoughts and feelings about environmental racism. Must be at least 1 paragraph.

Activity #3.1 Food Justice Lesson Inquiry

Foodspan.org Community Food Availability Maps

Food Justice Intro

Lesson 14

The Hunger Gap



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Food Security Definition

Consistent access to enough safe, nutritious food for an active, healthy life, without resorting to emergency food programs, scavenging, or stealing.

Source: Andrews M, Nord M, Bickel G, Carlson S. *Household food security in the United States, 1999*. USDA ERS. 2000.

Photo credit: Michael Milli, CLF.



Household Food Security

Members of food-insecure households may:

- Be forced to skip meals
- Be unable to afford balanced meals
- Worry their food will run out before they can afford to buy more
- Eat less than they feel they should because they lacked money to buy more
- Lose weight because there wasn't enough money for food

Source: Coleman-Jensen A, Nord M, Andrews M, Carlson S. *Household Food Security in the United States in 2010*. USDA ERS. 2011.

Photo credit: Michael Milli, CLF.



Household Food Security

Almost one in seven U.S. households — over 17 million — suffer from food insecurity.

Source: Coleman-Jensen A, Gregory C, Singh A. *Household Food Security in the United States in 2013*. USDA ERS. 2014.

Photo credit: Michael Milli, CLF.



Food Deserts

Areas with limited access to healthy food, often defined using these four criteria:

- Household income
- Distance from a supermarket
- Vehicle ownership
- Availability of healthy food in local stores

Source: Johns Hopkins Center for a Livable Future. The Maryland Food System Mapping Resource. 2012: Documentation.

http://www.jhsph.edu/clf/programs/food_mapping/documentation/

Photo credit: Spence Lean. Pigtown: All Things Baltimore, 2009. www.sustainablecitiescollective.com. Used with permission.



Activity #4.1 Food Justice Study

Food Justice Study

Link To Video:

<https://wtvi.pbslearningmedia.org/resource/envh10.sci.ess.watcyc.foodjustice/food-justice/>

Urban high school students discuss problems in food systems and what can be done about them in this adaptation of a video they created in collaboration with the Environmental Justice League of Rhode Island. They discuss lack of access to fresh fruits and vegetables in urban areas; the high cost of healthy food compared to cheap and abundant junk food; the lack of food grown locally; and animal cruelty. The students offer solutions to these problems, such as urban gardening, buying local food at farmers markets, composting, recycling, and tree planting.

Discussion Questions	<ul style="list-style-type: none">• What is the first thing you see when you enter your local corner store?• Map the fast food restaurants in your neighborhood. Then map the full-service restaurants or grocery stores. How do the maps compare to each other?• Where does your family buy most of their food? Where does this food come from? What are the environmental impacts of producing and distributing that food?• What did you eat yesterday? How could your choices have been healthier?
Solutions	<ol style="list-style-type: none">1. What were some of the solutions students talked about?2. Which is the easiest to implement? What is the most difficult? Why?3. What do you imagine could be done in Charlotte?4. Why is it so important to be “solution oriented”?
Research	<ol style="list-style-type: none">1. Research food justice movements in Charlotte and North Caroline. Write down what it is, why it's important, and how it is positively impacted the community.

Activity #4.2 PBS Food Justice Lesson

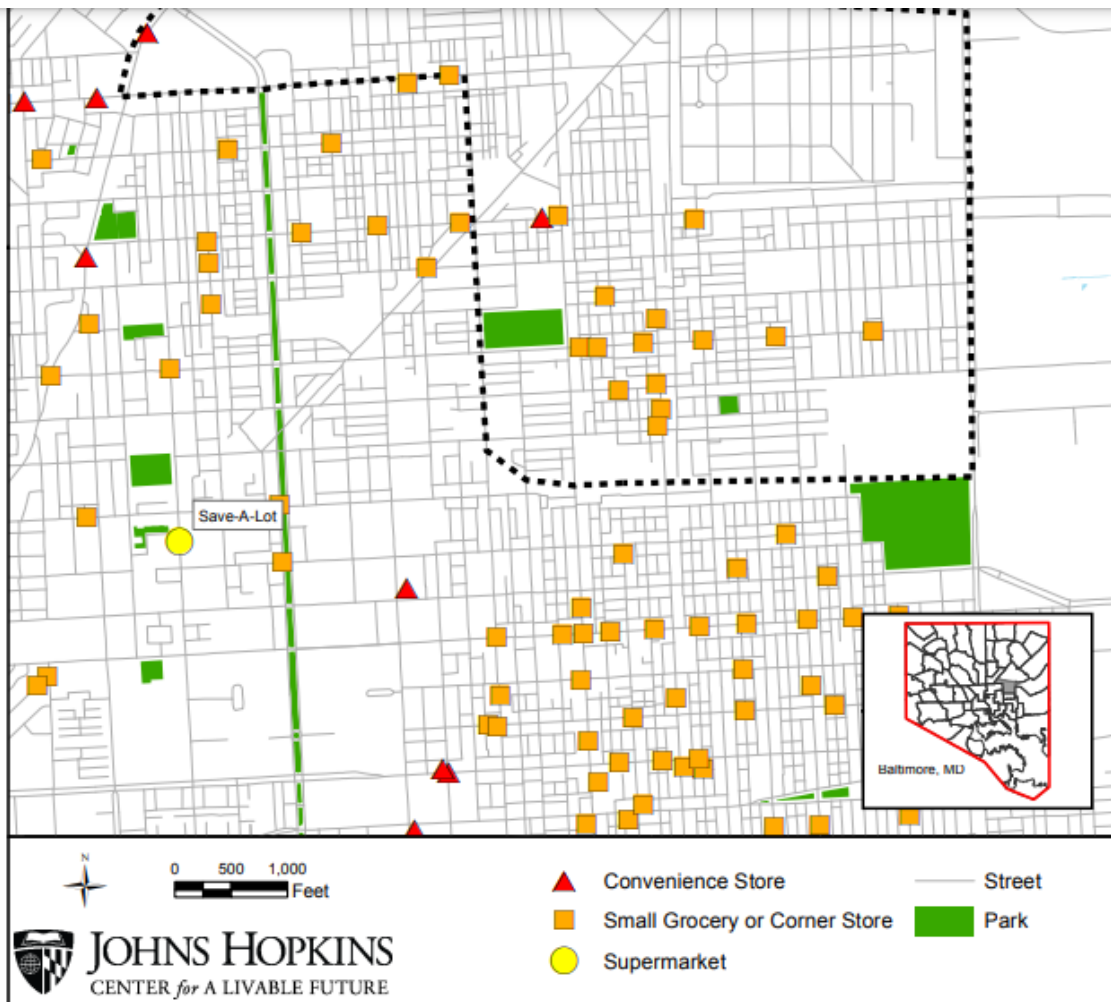
Food Availability Maps Activity

Reflection/Introduction Questions

1. What is the name of our community?
2. What are the main types/kinds of food eaten in the community? Why?
3. From what type of store(s) do you think most residents in this community get the majority of their food? How might this differ among residents who have access to a vehicle versus those who don't?
4. Does this type of store(s) generally offer a variety of healthy options, such as fruits, vegetables, whole grains, and beans, at affordable prices?
5. Based on what you know about Charlotte, how would you describe how difficult it is for residents of this community to get enough healthy food?
6. What additional information might help you better measure how difficult it is for residents of this community to get enough healthy food?

Map It Out: Go to google maps and list all the grocery stores/Supermarket and convenience stores within 5-10 miles

Map #1: Food Availability in Clifton Park, Baltimore

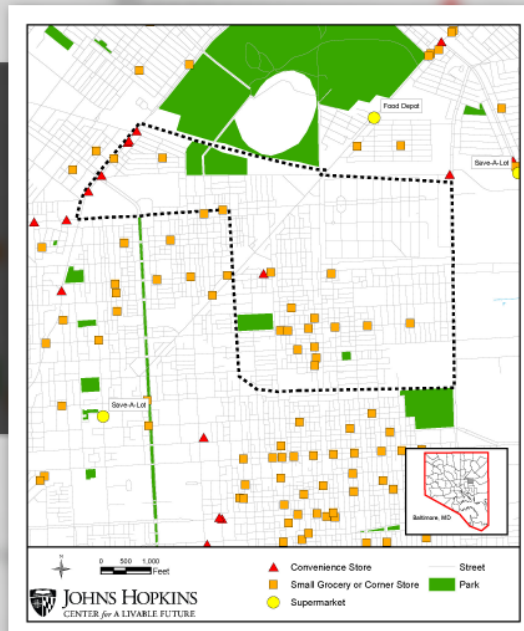


Community Food Availability Map: Clifton Park

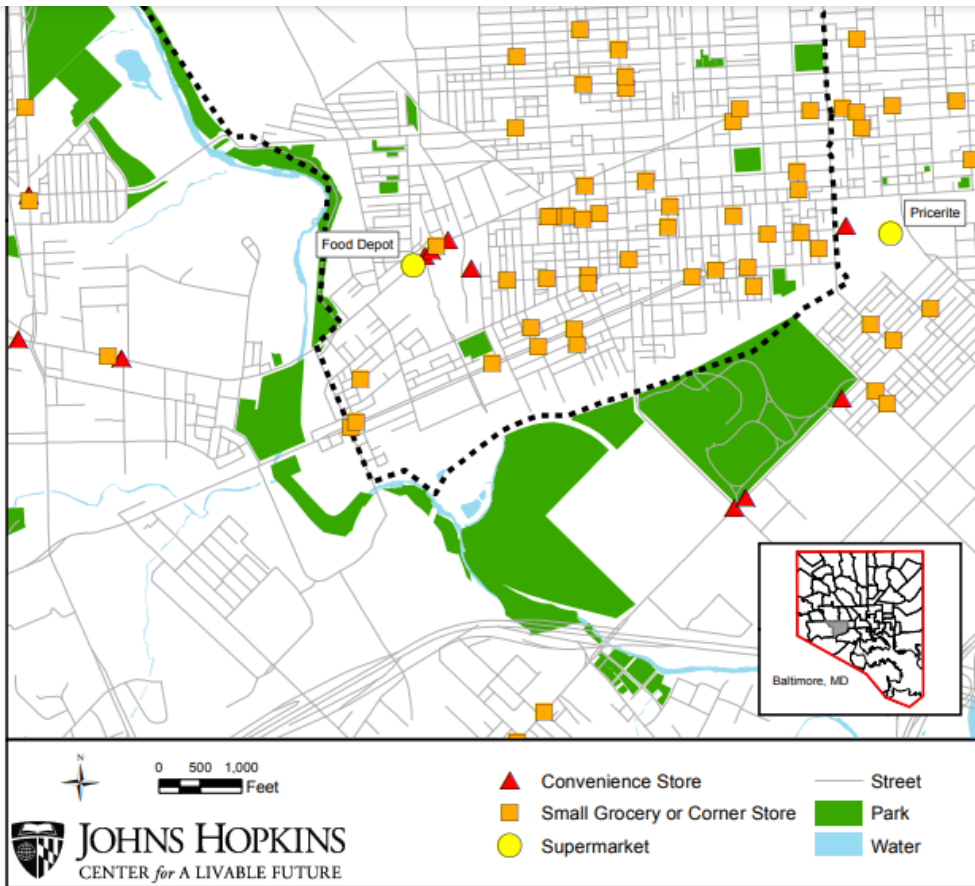
- Median household income: \$25,737
- Percent of households with no vehicles available: 44.2%

Image credit: Maryland Food System Map. Johns Hopkins Center for a Livable Future.
<http://mdfoodsystemmap.org/>

Data source: Baltimore Neighborhood Indicators Alliance, Jacob France Institute.
<http://bniajfi.org/>



Map #2: Food Availability Southwest, Baltimore



Community Food Availability Map: Southwest Baltimore

- Median household income: \$24,946
- Percent of households with no vehicles available: 52.8%

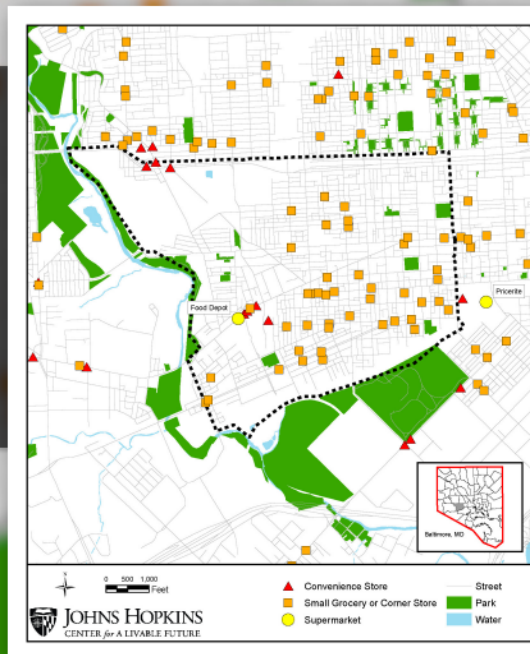
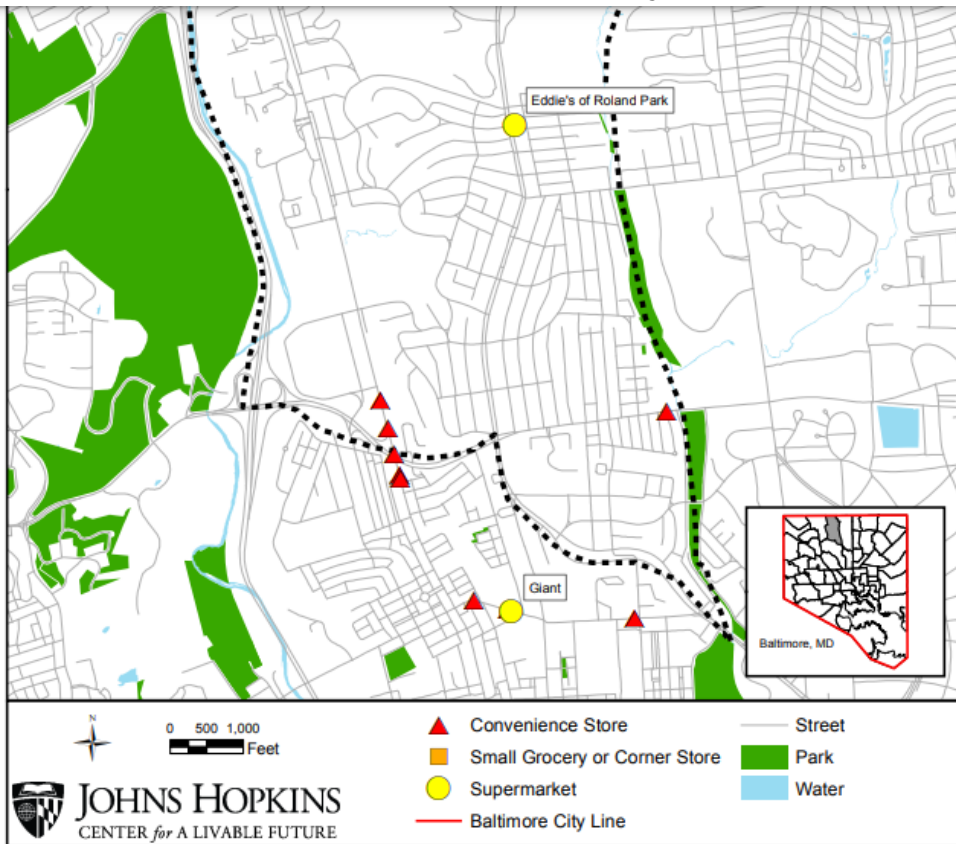


Image credit: Maryland Food System Map. Johns Hopkins Center for a Livable Future.
<http://mdfoodsystemmap.org/>

Data source: Baltimore Neighborhood Indicators Alliance. Jacob France Institute.
<http://bniajfi.org/>

Map #3: Food Availability in Roland Park, Baltimore

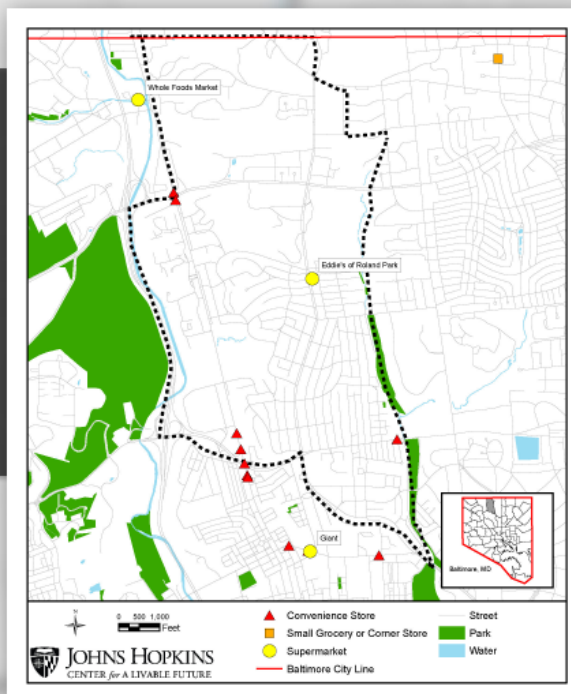


Community Food Availability Map: Roland Park

- Median household income: \$104,481
- Percent of households with no vehicles available: 4.4%

Image credit: Maryland Food System Map, Johns Hopkins Center for a Livable Future.
<http://mdfoodsystemmap.org/>

Data source: Baltimore Neighborhood Indicators Alliance, Jacob France Institute.
<http://bniiafi.org/>



Map #1: Clifton Park	<ol style="list-style-type: none"> 1. From what type of store(s) do you think most residents in this community get the majority of their food? How might this differ among residents who have access to a vehicle versus those who don't? 2. Does this type of store(s) generally offer a variety of healthy options, such as fruits, vegetables, whole grains, and beans, at affordable prices? 3. Based on the information given, how would you describe how difficult it is for residents of this community to get enough healthy food? Would you consider this community a food desert? Why or why not? 4. What additional information might help you better measure how difficult it is for residents of this community to get enough healthy food?
Map #2: Southwest	<ol style="list-style-type: none"> 1. From what type of store(s) do you think most residents in this community get the majority of their food? How might this differ among residents who have access to a vehicle versus those who don't? 2. Does this type of store(s) generally offer a variety of healthy options, such as fruits, vegetables, whole grains, and beans, at affordable prices? 3. Based on the information given, how would you describe how difficult it is for residents of this community to get enough healthy food? Would you consider this community a food desert? Why or why not? 4. What additional information might help you better measure how difficult it is for residents of this community to get enough healthy food?
Map #3: Roland Park	<ol style="list-style-type: none"> 1. From what type of store(s) do you think most residents in this community get the majority of their food? How might this differ among residents who have access to a vehicle versus those who don't? 2. Does this type of store(s) generally offer a variety of healthy options, such as fruits, vegetables, whole grains, and beans, at affordable prices? 3. Based on the information given, how would you describe how difficult it is for residents of this community to get enough healthy food? Would you consider this community a food desert? Why or why not? 4. What additional information might help you better measure how difficult it is for residents of this community to get enough healthy food?

Activity #5.1 Service Project

Service Project Overview

Directions and Overview: You are going to create and design a service project that students could participate in to better our community. The goal is to create a project that enhances the environment or is a solution to an existing problem like air or water pollution. We have learned about the issue in our communities and other communities like us. Now it is time to

<p>Step One: Research</p> <ol style="list-style-type: none"> 1. https://ncejn.org/ 2. https://foodtank.com/news/2015/06/ten-projects-transforming-charlottes-food-system/ https://www.ncclimatejustice.info/ 3. Or do your own research finding food justice or environmental racism movements in our area 	<p>Step Two: Proposal</p> <ol style="list-style-type: none"> 1. Create a proposal and answer the following questions: <ul style="list-style-type: none"> • Describe the project, what you will be doing. • What is the approximate date and time of your project? • Describe how you will promote your project. • Describe who will benefit from your project, and how they will benefit. • Describe how you can benefit from this experience. • Create a timeline of how and when it will get done. 	<p>Step Three: Informational Pamphlet</p> <ol style="list-style-type: none"> 1. Create an informational graphic or handout to inform of the issue. Give background, history, and explain why it is an issue. 2. Describe why your service project will help the issue. 3. Be sure to include color and pictures.
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Rubric			
	Proficient	Emerging	Not Yet
Research	<ul style="list-style-type: none"> -Accurate information from different organizations -Included informed action -Accurate information about climate issue being addressed 	<ul style="list-style-type: none"> -Mostly accurate information from organizations -No informed action -Somewhat accurate information about issue being addressed 	<ul style="list-style-type: none"> -Incomplete information -No informed actions -No information about the issue being
Proposal	<ul style="list-style-type: none"> -Accurate information -Answers all the questions -Includes specific information like people and dates 	<ul style="list-style-type: none"> -Mostly accurate information -Answers a few or most of the questions -Includes vague information and no date or people 	<ul style="list-style-type: none"> -Very little accurate information -Not turned in

Infographic/Handout	<ul style="list-style-type: none"> -Accurate information -Images -Color -References to find more information about the topic -Statement on why it is important to address the issue 	<ul style="list-style-type: none"> -Mostly accurate information -No color -No References or few references -Limited statement on importance 	<ul style="list-style-type: none"> -No accurate information provided -Not turned in
Spelling/Grammar	<ul style="list-style-type: none"> -Minimal Spelling or grammar errors 	<ul style="list-style-type: none"> -A few spelling or grammar errors 	<ul style="list-style-type: none"> -Extensive grammar errors -Not turned in

Notes