

Farmstand Business Curriculum

Facilitator's Guide



GROW NYC



Farmstand Business Curriculum Facilitator's Guide Units 1 – 2 Grades 9-12

Teaching students the basics of growing food, creating a business, and working as a team to serve their community with support from GrowNYC's existing youth engagement programs.



GROWNYC

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Note to Facilitator on How to Use this Curriculum

Welcome to the Facilitator's Guide for GrowNYC's Farmstand Business Curriculum!

CURRICULA OFFERINGS

Unit 1: Getting to Know the Local Food System

An 8-lesson Unit that explores foundational concepts in food, farming, and the environment. Students will begin to think about their food system, urban farming, and food access, and will explore ideas for developing a real or hypothetical farm business that meets the needs for their surrounding community.

Key Subject Areas

- Science & Environment
- Social Studies
- ELA & Literacy

Unit 2: Introduction to Business

A 4-lesson Unit that expands on Unit 1 by introducing students to foundational concepts in business, finance, organizational structure, and marketing. Students will begin to apply learned skills to their farm business plan and will consider the ways that they can actualize their real or hypothetical farm business.

Key Subject Areas

- Business & Marketing
- ELA & Literacy

Read through the steps below before you begin facilitating Unit 1 or Unit 2 of this curriculum. We recommend you complete Unit 1: Getting to Know the Local Food System first, before moving on to Unit 2: Introduction to Business.

WHICH OPTION WILL YOU FACILITATE?

There are two main options you can choose from:

Option 1: Set up a real food access point with the intent of growing and/or distributing produce

Option 2: Set up a hypothetical food access point with no plan to grow nor distribute produce

Note: A food access point is a place where consumers can purchase or get nutritious, high quality and affordable food. A food access point can be a supermarket, bodega, grocery store, market, farmstand, soup kitchen, and more.

Option 1 requires a dedicated facilitator with the goal of creating a real-life food access point. This project is a major undertaking and requires more oversight, resources, and time. Option 2 can be facilitated virtually or on school campuses that do not have access to growing space and or with schools who have no intent of growing or distributing food. This curriculum is primarily oriented towards Option 1 because it requires the most preparation, however, Option 2 can be taught with a similarly serious tone, understanding that students and facilitators are role-playing or pretending that they are building a real business. The skills gained by following Option 2 are still valuable and we recommend participating in this project no matter the option you have access to.

Additionally, you do not need to grow food to distribute food! For schools receiving produce from off their school campus, you can complete Option 1 with the intention of creating a real food access point without the farm or garden component.

Note: If you've selected Option 1 and plan on growing and or distributing produce, we recommend reading through Unit 2: Intro to Business and the [School Farmstand Manual](#) before you begin this curriculum. If you have any questions, please reach out to schoolgardens@grownyc.org.

DETERMINE YOUR STARTING POINT

The food access business students will create, whether real or hypothetical, has the potential to be based on the garden, farm, or growing space on your school campus. If you don't have a garden or farm, don't worry, your students will begin to imagine what that could look like. Determine what stage best suits you and recognize that you might fall between some of these stages. As you move through Unit 1, these stages will become more relevant, so make sure you and your classroom community know where you are at before you begin:

Stage 1: No growing space or growing operations (no planting, producing, distributing)

Stage 2: Foundation or space for growing but not currently growing plants or food

Stage 3: Space that is active with some growing but not distributing food or producing enough for distribution

Stage 4: Space that is currently active and growing food with some form of distribution (i.e. donating, using for coursework, supplying to the cafeteria, etc.)

There is no right or wrong place to begin this curriculum. Each lesson in this curriculum has valuable learning outcomes for your students regardless of if you are growing food, plan on developing a food access business, or are simply looking to expand your knowledge of our food system.

REVIEW THE LESSON STRUCTURE

Each lesson is divided into five parts: warm-up, part one, part two, wrap-up and reflection, and activity extensions. We recommend completing them in this order, however, they are also created as standalone activities and can be adjusted to meet the needs of your students.

Warm-up: The goal of the warm-up is to spark students' interest while allowing them to think about their connection to the topic of the lesson.

Part One: The first major section of each lesson introduces students to the key theme. It includes background information and a short activity that exposes students to key questions of the lesson.

Part Two: The second major section of the lesson allows students to apply what they learn from part one to the food access business for their school community (real or hypothetical).

Wrap-up & Reflection: Key questions for summarizing the lesson's topic to be used as a guide for discussion or independent reflection.

Activity Extensions: Activity extensions can be found directly in the lesson plan. If you are looking for more resources, videos, and learning materials to support each lesson, those can be found in the Facilitator's Guide.

Timestamps for each section are identified throughout the lesson plan, however, there is room for flexibility if you want to adjust the amount of time you give each section. Some of the lessons have activities that have different time options, and some activities have optional extensions. These are noted directly in the lessons.

Here are a few recommendations for approaching each lesson based on your time needs:

45 minute-period

Each lesson can be completed in 45 minutes. If some lessons feel tight for you, we've structured the curriculum so you can wrap up after part one and assign part two as a take-home assignment or complete another class period. If you're completing it this way, the discussion questions at the end of Part One may serve as a wrap-up and reflection. Additionally, you are always welcome to expand on activities that have different timed options or extensions.

90 minute-period

This will allow you to stretch each section of the lesson to meet the needs of your students. If this is the case, leave more room for reflection during the warm-up, spend more time on the discussion questions, and allow ample time for research and group work during part one and part two activities. Some lessons have suggested extensions, which can be incorporated into your classroom period or offered as take-home assignments.

ADDITIONAL OFFERINGS

[The School Farmstand Manual](#) was created to support your student's creation of a real farmstand business. **This guide is useful for those who are delivering Option 1, and who intend on growing and/or distributing food.** Unit 1 and Unit 2 serve as a prerequisite to creating your actual business; however, the facilitator should read through the guide if they are interested in developing an actual farmstand business with their students.

[GrowNYC's Food Justice Curriculum](#) is a great resource for those looking to expand on conversations in this curriculum.

NOTES:

Unit One: Getting to Know the Local Food System

Lesson One: Food Systems

OBJECTIVE

In this lesson, students will learn about food systems at varying scales while beginning to explore their local food system. Students will be asked to identify key stages of the food system from a local food system to a global food system. Students will identify food stakeholders in their community and begin to map their local food system.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is a food system? • What happens at each stage of the food system? • What are the major differences between a local and global food system? • What is a stakeholder? • What does our local food system look like? 	<p>Students will...</p> <ul style="list-style-type: none"> • Think about how they interact with their food system daily. • Understand what happens at each point in the food system and the role of stakeholders at each stage. • Understand the differences between a global, regional, and local food system. • Identify stakeholders within their local food system.
<p>NYS Standards</p> <p><i>Next Gen ELA/Literacy</i> 11-12.RST.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.</p>	

ADD-ON ACTIVITIES

- Think of a food or food product that you consume regularly, anything from an apple to a bag of chips. Use the food system chart to understand how your food travels through each stage of the food system process. Map out the process from start to finish: Food production → Processing → Distribution → Retail and Market → Consumption → Waste Recovery
- If you have access to computers, take some time to research specific farms or companies that produce the food you chose, identify distribution companies, brainstorm where the food is sold to consumers, and ways it is eaten. Add as much detail as you can to your story.
- Investigate the food at your local grocery store to determine where the food is sourced from and what scale of food system your grocery store is a part of. Place the food you find at the grocery store within a food system map. Is the food coming from your local food system, regional food system, or international food system? Is the food in your grocery store grown locally or from faraway places? Is the food certified organic?

Unit One: Getting to Know the Local Food System

Lesson Two: Food Access

OBJECTIVE

In this lesson, students will learn about their classroom communities' diverse perspectives and relationships to food. Students will identify the root causes of food insecurity, learn about food access points, and explore ways to fill food access gaps within their local school community.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is food access? What is food security? • How do food distribution and access vary across our classroom community and NYC? • What is a food access point? • What ideas do we have for addressing food access in our community? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand how food access varies across their classroom community. • Learn about the root causes of food insecurity and different food access points in NYC. • Identify present barriers to food access within their local food system, and brainstorm ideas for filling it.
<p>NYS Standards</p> <p><i>Next Gen ELA/Literacy</i></p> <p>11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.</p> <p>11-12SL1b: Work with peers to set norms for collegial discussions and decision-making, and establish clear goals, deadlines, and individual roles as needed.</p> <p>11-12SL1d: Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.</p> <p><i>Social-Emotional</i></p> <p>1A. Identify and understand their emotions and how emotions relate to their actions. Use understanding of emotions to inform actions.</p> <p>2A. Recognize and build empathy for the feelings and perspectives of others.</p>	

ADD-ON ACTIVITIES

- Read some of the [Food Forward NYC: A 10 Year Policy Plan](#), and outline how you think this policy will impact your community. How could the policy improve to better address food access and support the local sustainable food system.
 - Role playing activity: Fast forward 10 years - you've been hired as a food policy consultant for the city. How would you design the next 10-year plan?

- Watch the student made documentary, [Bodega Down Bronx](#), made by NYC students with help from the Center for Urban Pedagogy.

ADDITIONAL RESOURCES

- [GrowNYC's Food Access Points](#)
- [Evolution of New York City Markets](#)
- [New York City's Public Markets, Past and Present](#)
- [Before Farmers' Markets Were Cool: Essex Street Market](#)

Unit One: Getting to Know the Local Food System

Lesson Three: Introduction to Urban Farming

OBJECTIVE

In this lesson, students will identify the major differences between industrial and small-scale agriculture and explore different types of urban farming in NYC. Students will brainstorm methods of urban farming that will expand on their food access goals for their school community.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is the difference between industrial and small-scale agriculture? What are the benefits? Challenges? • What is urban agriculture? • What are some examples of different types of farming in urban settings? • What method of food production do we think will support our local community? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand the basic differences between industrial agriculture and small-scale agriculture. • Understand the importance of urban agriculture in urban settings by learning about different urban farms in NYC. • Identify what food production techniques and guiding principles would support students' local community and food access needs.
<p>NYS Standards</p> <p>New York State P-12 Science Learning Standards HS-ESS3-2. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios</p> <p>HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity</p> <p><i>Next Gen ELA/Literacy</i> 11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p> <p>11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.</p> <p><i>Social Studies</i> 11.5 a New technologies and economic models created rapid industrial growth and transformed the United States.</p>	

ADD-ON ACTIVITIES

- Research these other urban farms in NYC. Some examples to start off from are: [Red Hook Farms](#), [Queens County Farm](#), [Randall's Island Urban Farm](#), What makes their farm unique, and who are the communities they serve?

ADDITIONAL RESOURCES

- [Movie: Food, Inc. \(2008\)](#)

- [Food Forward, Pilot Episode: Urban Farming](#)

Unit One: Getting to Know the Local Food System

Lesson Four: Land Usage

OBJECTIVE

In this lesson, students will learn about the Native groups whose land they are on, Indigenous Knowledge practices, and how Native ways of caring for land contrast modern industrial agriculture systems. Students will use community gardens as models for expanding on the ways agriculture can include communal practices and Indigenous Knowledge.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What Native land are we on? • What are the key differences between Indigenous practices and industrial farming practices? • What are community gardens? • What communal and Indigenous land use practices can we bring into our vision for urban food production? 	<p>Students will...</p> <ul style="list-style-type: none"> • Learn about the history of their land and the Native groups who steward it. • Understand how traditional land knowledge impacts food access, public health, climate change, and the environment. • Research community gardens and Indigenous land practices to further develop their food access initiatives.
<p>NYS Standards</p> <p><i>New York State P-12 Science Learning Standards</i> HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.</p> <p>ESS3.C: Human Impacts on Earth Systems The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources. (HS-ESS3-3)</p> <p><i>Next Gen ELA/Literacy</i> 11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p> <p>11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.</p> <p><i>Social Studies</i> 11.1 a Contact between Native American groups and Europeans occurred through cultural exchanges, resistance efforts, and conflict.</p>	

ADD-ON ACTIVITIES

- If you have time, as a class, walk over to the community garden closest to your school to see what is happening in the space. Is food growing? Do they generate compost? Do they host community events or education programs?

- Students can also visit the community garden they selected by their house on their way home from school. What descriptors or characteristics of the garden exist in real life that you didn't find in your research of the garden?
- If students seem enthusiastic about community gardens, consider offering them extra credit to become members of their local community garden.
- Find places around your community that could be turned into community gardens. Look into the history of community gardens in NYC to find out how you would go about advocating for this space to be turned into a community garden.
- Look into the additional resources for land access listed below. How would these support farmers in NYC and NY state? Are there any relevant resources that could support your project at school?

ADDITIONAL RESOURCES

- [Why Native Americans are buying back land that was stolen from them - YouTube](#)
- [Reparations Map — Northeast Farmers of Color Land Trust](#)
- [Soul Fire Farm](#)
- GrowNYC Gardens: [Bronx](#), [Brooklyn](#), [Manhattan](#), [Queens](#), [Staten Island](#)
- [GreenThumb - NYC Parks](#)
- [Aquaponics in the Teaching Garden - GrowNYC Education](#)
- [Oko Farms](#)
- [Green Bronx Machine](#)
- [NYC School Uses Hydroponic Farm to Make Healthy School Lunches| NowThis - YouTube](#)
- [Brooklyn Grange](#)
- [Hattie Carthan Community Garden](#)
- [Micro BK Urban Farm](#)
- [White Pine Community Farm](#)
- [Small Axe Peppers](#)
- [Hot Bread Kitchen](#)

LAND ACCESS RESOURCES

Below you'll find resources that can be of use to anyone interested in accessing farmland in NYC and NY State. Feel free to share these resources with your community.

Finding Land in NYC:

- [OASISNYC](#)
- [Living Lots NYC](#)
- [596 Acres.org](#)
- [NYCommons.org](#)
- [New York Farmland for Sale](#)

Mailing lists for these beginning farmer programs:

- [GrowNYC Farm Beginning Course](#)
- [Farm School NYC Citywide course](#)

Organizations involved with Land Access in NYC

- [Green Thumb](#)
- [Bronx GreenUp](#)
- [Trust for Public Land](#)
- [New York Restoration Project](#)

- [Green Guerillas](#)
- [Bronx Land Trust](#)
- [Brooklyn/Queens Land Trust](#)

Finding Land in NY State

- [Finding a Farm to Buy or Lease in NY](#) (Guide by Cornell University)
- [NY Land Quest](#)
- 1-800-547-3276 provides information, consulting, referrals, and resources related to transferring farm ownership to the next generation or non-family member.
- [NOFA-NY](#) – The Property for Rent/Sale listings are standard classified ads and are shorter in length and are not filtered by their details. Land Offered and Land Sought listings are more in-depth forms and listings for NOFA-NY's land linking database.
- [Columbia Land Conservancy](#)
- [NY Farmland Finder](#) – Maintains the regional working agricultural landscape by connecting farmers with underutilized land.
- Your [local FSA office](#): Request a list of inventory properties, if they have a land inventory it would include properties that are inventoried as delinquent loans and are offered through a process similar to an auction. Farm operators report rental rates to the USDA Farm Service Agency in Seneca Co. FSA can be reached at 315-568-6346.
- [American Farmland Trust](#)
- [Hudson Valley Ag Development Corp.](#)
- [Mohawk – Hudson Land Conservancy](#): [SCORE](#) is your destination for free business templates, e-guides, checklists, blogs, infographics, videos, tools and other helpful resources to help you start and grow your small business.

Unit One: Getting to Know the Local Food System

Lesson Five: Food Sovereignty and Agroecology

OBJECTIVE

In this lesson, students will explore the nuances of the global food movement through concepts like food sovereignty, agroecology, food forests and Indigenous Forest gardens, peasant farming, the peasant food web, and community-centered farms. Lastly, they will then brainstorm a collective vision for food sovereignty within their local community.

Learning Outcomes

Key Questions

- What is food sovereignty?
- What is agroecology?
- What have global food movements contributed to agriculture?
- What visions do we have for food sovereignty in our community?

Students will...

- Explore global food sovereignty movements.
- Understand the importance of community-driven food movements globally and locally.
- Identify a collective vision for food sovereignty in our communities for our farm business.

NYS Standards

Next Gen ELA/Literacy

11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.

11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.

11-12W4: Create a poem, story, play, artwork, or other response to a text, author, theme or personal experience; demonstrate knowledge and understanding of a variety of techniques and genres. Explain connections between the original and the created work

Social Studies

10.8 a Cultures and countries experience and view modernization differently. For some, it is a change from a traditional rural, agrarian condition to a secular, urban, industrial condition. Some see modernization as a potential threat and others as an opportunity to be met.

Social-Emotional

2B. Recognize and affirm individual identities as well as individual and group similarities and differences, including those rooted in culture, ethnicity, race, religion, sexual orientation, gender identity or expression, ability, etc.

ADD-ON ACTIVITY

- Learn about farming history and your ancestry by talking to your family. Find out if anyone in your family has experience farming or gardening. What stories can they share about this, and what did they grow?

- Think about what you and your family like to eat. Bring in a family recipe and make a list of ingredients from the recipe that could be grown in your school garden (if you can't think of any, try a different recipe). Research the ingredients you've selected (mainly vegetables or herbs) to determine whether they can be grown in the NYC climate, when they should be planted, and any notes about caring for the crops.
- As a class, watch the movie "[Gather](#)".

ADDITIONAL RESOURCES

- [La Via Campesina: Food Sovereignty - A Guide](#)
- [Six Pillars of Food Security](#)
- [Food Sovereignty: What It Is and Why It's Important - YouTube \(NowThis Earth\)](#)
- [United Nations Indigenous Languages](#)
- [The Sengwer, Embobut forest, Chengany Hills, Kenya - YouTube](#)
- [Mesoamerican Permaculture Institute \(IMAP\)](#)
- [Permaculture Around Latin America - The IMAP in Guatemala](#)
- [Cooperative Climate Futures - Food](#)
- [Who Will Feed Us? Full Length - YouTube](#)
- [The Farms – Red Hook Initiative](#)

Unit One: Getting to Know the Local Food System

Lesson Six: Food, Farming, and Racial Justice

OBJECTIVE

In this lesson, students will explore contributions made by Black and Brown activists, agriculturalists, and inventors to contextualize the modern-day food system and food justice movements. Students will take time to reflect on Black and Brown figures, past and present, through a writing and art activity.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What are some African contributions to the food system and food movements? • What Black and Brown stories, personal or historical, do we feel resonate with us or with our farm business? 	<p>Students will...</p> <ul style="list-style-type: none"> • Explore how, through different periods, Black and Brown people have successfully impacted agriculture and the world. • Critically reflect on a certain Black or Brown historical figure or moment from history that they feel personally resonates with them.
<p>NYS Standards</p> <p><i>Next Gen ELA/Literacy</i> 11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p> <p>11-12W4: Create a poem, story, play, artwork, or other response to a text, author, theme or personal experience; demonstrate knowledge and understanding of a variety of techniques and genres. Explain connections between the original and the created work.</p> <p>11-12W5: Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p><i>Social Studies</i> 11.7 b African Americans continued to struggle for social and economic equality while expanding their own thriving and unique culture. African American cultural achievements were increasingly integrated into national culture.</p> <p>11.10 b Individuals, diverse groups, and organizations have sought to bring about change in American society through a variety of methods.</p> <p><i>Social-Emotional</i> 2B. Recognize and affirm individual identities as well as individual and group similarities and differences, including those rooted in culture, ethnicity, race, religion, sexual orientation, gender identity or expression, ability, etc.</p>	

ADD-ON ACTIVITIES

- Watch [High on the Hog](#) on Netflix

- Watch [Appetite for Change](#) on Youtube
- Check out Ron Finley's [Masterclass](#) or his Ted Talk on [Youtube](#)

ADDITIONAL RESOURCES

- Check out these resources on youth farming
 - [Young Farmer's Coalition- NYC Chapter](#)
 - [Beginning Farmers](#)
 - [Teens for Food Justice](#)
 - [The Food Project](#)
 - [A profile of agriculture in New York state](#)
 - [The Black farmers fighting food deserts in New York](#)
 - [Growing locally: NYBG partners with new community farm hubs to tackle food insecurity close to home](#)
 - [History of farm gardens in NYC Parks](#)
 - [6 Black owned farms and CSAs doing evolutionary work](#)
 - [Biden is Courting Black Farmers, but They're Paving Their Own Road to Justice](#)
 - [Community Food Action - New Settlement Apartments](#)
 - [Green Guerillas](#)
 - [East New York Farms](#)
 - [Local Roots NYC](#)
- Check out these resources related to urban farming and Black farming
 - [Black Farmers United](#)
 - [Sisters plant the seeds for a new generation of Black farmers: "We want people to reconnect"](#)
 - [New York State Department of Agriculture and Markets](#)
 - [15 Urban Farms and Gardens Bringing Fresh Produce and Food Education to New Yorkers](#)
 - [Farm School NYC](#)
 - [Community gardens and urban agriculture](#)
 - [NYC Urban Agriculture](#)
 - [USDA Urban Agriculture Toolkit](#)
 - [One Urban Farm's Impact on Health and Well-Being in New York City](#)
 - [The Potential for Urban Agriculture in New York City](#)
 - [Gardening & Agriculture: New York City Gardening and Agriculture](#)
- [Visual Timeline of Africa Before Slavery](#)
- [7 Black Innovators in Agricultural Industry](#)
- [Osiris - World History Encyclopedia](#)
- [Black Rice — Judith A. Carney | Harvard University Press](#)
- [This is the story of Black hair - YouTube](#)
- [George Washington Carver National Monument](#)
- [Sharecropping - Slavery by Another Name - PBS](#)
- [This Little Light of Mine · Fannie Lou Hamer - YouTube](#)
- [Fannie Lou Hamer founds Freedom Farm Cooperative](#)
- [Fannie Lou Hamer's Powerful Testimony | Freedom Summer - YouTube](#)
- [The Truth Behind '40 Acres and a Mule'- PBS](#)
- [Land Loss and Reparations Project](#)

- [Brook Park Community Garden](#)
- [Black Urban Growers](#)
- [Karen Washington — Rise & Root Farm](#)
- [Green City Force](#)
- [Justice for Black Farmers Act of 2021 | Library of Congress](#)
- [Map of NYC Community Fridges](#)
- [Inner City Green Team, Inc.](#)

Unit One: Getting to Know the Local Food System

Lesson Seven: Food, Farming, and Climate Change

OBJECTIVE

In this lesson, students will learn about how climate change connects to the food system through exploring climate-conscious farming practices. Students will incorporate these practices into their farm business thinking.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is climate change? • How will climate change impact our food system? • How are farmers responding to climate change? • What climate-friendly techniques can be incorporated into our farm business? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand the ways that climate change impacts our food system. • Research practices that farmers are using to respond to climate change. • Redesign their urban farm plan to incorporate climate-friendly practices.
<p>NYS Standards</p> <p><i>New York State P-12 Science Learning Standards</i></p> <p>HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity</p> <p>HS-ESS3-4: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems</p> <p>HS-ESS3-5: Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems</p> <p><i>Next Gen ELA/Literacy</i></p> <p>11-12.RST.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.</p>	

ADD-ON ACTIVITIES

- Create a proposal for your school or your local community board that outlines the ways they can better respond to local climate impacts.
- As a class, work through lessons and worksheets from NYC Department of Environmental Protection's Climate Change Education Module.

ADDITIONAL RESOURCES

- [Climate Change Education Module - DEP](#)
- [Additional Climate Resources](#)
- [Intro to Climate Change Presentation](#)
- [Solar One's Educational Resources on Energy](#)
- [New York State Department of Agriculture's Seasonal Harvest Calendar](#)
- [GMOs and Seeds](#)
- Free or Reduced cost seed libraries in the NYC area:
 - [Reclaim Seed NYC- Queens](#)
 - [New York Public Library- Manhattan](#)
 - [NYC Parks Department](#)
- [Plant Hardiness Zones](#)
- [Parts of a Plant](#)
- [Plant Biology](#)

Unit One: Getting to Know the Local Food System

Lesson Eight: Agriculture Science

OBJECTIVE

In this lesson, students will learn the basics of agricultural science and will begin to think about actualizing their farm business ideas. Students will be asked to create asset maps for different farming methods, considering what tools and resources are available to them in their community.

Learning Outcomes

Key Questions

- What is agriculture science?
- What is needed to grow food in NYC?
- What assets does our community already have for growing food and plants and what resources can we source from to grow food for our community?

Students will...

- Understand what agriculture science is.
- Understand the necessities for plant growth and growing food in NYC.
- Identify what tools, resources, and community assets are needed to grow food in their community.

NYS Standards

New York State P-12 Science Learning Standards

HS-ETS1-1: Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants

HS-ETS1-2: Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts

Next Gen ELA/Literacy

11-12SL1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on complex topics, texts, and issues; express ideas clearly and persuasively, and build on those of others.

Social-Emotional

3C. Take action to support the wellbeing of their school and community, including taking stands against bias and injustice.

ADD-ON ACTIVITIES

- Create one mega-asset map as a class by combining the assets from all the asset maps from each small group. Students can then refer to this one asset map throughout the whole curriculum and food access project.
- Explore crop planning tools and growing guides using these free resources: [Veg Plotter](#) and [Old Farmer's Almanac](#).

- Before you can start considering what to grow in your garden or farm, a good first step would be to determine the health of your soil. Soil testing is the best way to get information about your soil and determine the which crops would do well in it.
 - [Healthy soils, Healthy Communities](#) - soil health resources
 - [Soil testing services](#) from Cornell Cooperative Extension
 - [Sample collection](#)
 - [Completing submission forms](#)
 - [Understanding and interpreting your results](#)
- Look at existing GrowNYC material on composting to explore the potential benefits of using compost in your garden.
 - [Learn how to make compost at home](#)
 - [Beginner intensive- Home composting](#)
 - [Soil health and composting](#)
- The food you eat can be a good source of seeds and this workshop can help you [learn how to save your own seeds for planting](#)

ADDITIONAL RESOURCES

- [Interactive Soil Health Learning Activity](#)
- [GrowNYC Beginner Farmer Course](#)

Unit Two: Introduction to Business

Lesson Nine: Business Basics

OBJECTIVE

In this lesson, students will explore business models and evaluate different operating procedures for their real or hypothetical food access business.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is a business and what are the key factors involved in business? • What is a business model? • How does the labor of farming connect to the business of farming? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand what business is and how it applies to farming and food. • Learn about different types of business models. • Understanding how labor and farming intersects with business. • Begin to brainstorm business models for their farm business.
<p>NYS Standards</p> <p><i>Career Development and Occupational Standards (CDOS)</i></p> <p>Standard 2: Integrated Learning Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings</p> <ol style="list-style-type: none"> 1. Integrated learning encourages students to use essential academic concepts, facts, and procedures in applications related to life skills and the world of work. <p>Standard 3a: Universal Foundation Skills Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.</p> <ol style="list-style-type: none"> 4. Positive interpersonal qualities lead to teamwork and cooperation in large and small groups in family, social, and work situations. <p>Standard 3b: Core Business/Information System</p> <ol style="list-style-type: none"> 1. Basic Business Understanding <p>Standard 3b: Specialized Natural and Agricultural Sciences</p> <ol style="list-style-type: none"> 1. Basic Agriculture Foundation Development <p><i>Next Gen ELA/Literacy</i></p> <p>11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p>	

ADD-ON ACTIVITIES

- What are your favorite businesses? Challenge students to think of one small-scale community business, and one large corporation. Identify their products, the roles they play in the market, and how they generate revenue.
 - Brainstorm what their expenses might be (what are they spending money on?), estimate how large their staff is and how much profit they divert to pay wages.

- How did you first learn about these businesses? What key decisions have they made that help them operate a successful business? Does either business sacrifice their employees' quality of life? Do they provide their staff with livable wages?

ADDITIONAL RESOURCES

- [Intro to Farm Business Planning](#)
- [Market Channel: Restaurants](#)
- [Market Channel: Direct Markets](#)
- [Grapes Of Wrath: The Forgotten Filipinos Who Led A Farmworker Revolution - NPR](#)
- [Fair Labor Standards Act](#)
- [Living Wage Calculator - MIT](#)

Unit Two: Introduction to Business

Lesson Ten: Farm Business Finance

OBJECTIVE

In this lesson, students will explore options for organizational structures and generating pathways for start-up capital to fuel their food access business.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What organizational structures are used by farm businesses? • How do farm owners pay for the initial costs of starting a farm? • How do farmers determine the price of the food they sell? • How do farmers prepare inventory? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand what organizational structures are used by farm business. • Learn about different cost models for starting a business. • Understand how to price food. • Brainstorm business models and finance options for their farm business.
<p>NYS Standards</p> <p><i>Career Development and Occupational Standards (CDOS)</i></p> <p>Standard 2: Integrated Learning Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings</p> <ol style="list-style-type: none"> 1. Integrated learning encourages students to use essential academic concepts, facts, and procedures in applications related to life skills and the world of work. <p>Standard 3a: Universal Foundation Skills Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.</p> <ol style="list-style-type: none"> 2. Thinking skills lead to problem solving, experimenting, and focused observation and allow the application of knowledge to new and unfamiliar situations. 4. Positive interpersonal qualities lead to teamwork and cooperation in large and small groups in family, social, and work situations. <p>Standard 3b: Specialized Natural and Agricultural Sciences</p> <ol style="list-style-type: none"> 4. Agriculture Business Systems <p><i>Next Gen ELA/Literacy</i></p> <p>11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p>	

ADD-ON ACTIVITIES

- In this curriculum students should gain a basic understanding of business finance; however, it is essential that students also develop a strong understanding of personal finance. This is an important life skill that is often left out of classroom curricula. To set students up to sustain themselves long term after high school, students should explore the following personal finance concepts: credit score, taxes, opening a bank account, setting up a budget, managing loans, and creating financial goals. Here are some resources to get them started:
 - Credit: [Credit Karma](#), [Experian Boost](#), [Self Credit Builder](#), [Extra Card](#)

- Taxes: [IRS - Link and Learn Courses](#), [Video on Understanding Taxes](#)
- Opening a bank account: [Basic Banking](#)
- Loans & Interest Rates: [Student Loans and Interest Rates](#)
- Personal budgeting: [Personal Finance for H.S. Students](#)
- Creating financial goals: [How to Set Financial Goals](#), [10 Financial Goals Examples for Students to Set Now](#)

ADDITIONAL RESOURCES

- [LLC-Based Farm Transfer - Farmland Access Legal Toolkit](#)
- [Brooklyn Grange](#)
- [GrowNYC](#)
- [Corbin Hill Food Project](#)
- [Food Issues Group NYC](#)
- [Good Food Farmers](#)
- [Rock Steady Farm](#)
- [Brooklyn Supported Agriculture](#)
- [Basic Chart of Accounts](#)
- [GoFundMe](#)
- [Kiva](#)
- [CrowdStreet](#)
- [True Cost of Food - Rockefeller Foundation](#)

Unit Two: Introduction to Business

Lesson Eleven: Filling Gaps in Your Community

OBJECTIVE

In this lesson, students will begin engaging directly with their community to learn the key gaps that exist in their local food system. Students will design and disseminate a community needs assessment that will be used to shape their food access business.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is a target audience? • How do businesses use customer demographics to shape their work? • What are community relations? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand what a target audience is and how to define it. • Understand how marketing influences customers. • Understand how demographics shape marketing and business. • Design a community needs assessment to help shape their farm business.
<p>NYS Standards</p> <p><i>Career Development and Occupational Standards (CDOS)</i></p> <p>Standard 2: Integrated Learning Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings</p> <ol style="list-style-type: none"> 1. Integrated learning encourages students to use essential academic concepts, facts, and procedures in applications related to life skills and the world of work. <p>Standard 3a: Universal Foundation Skills Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.</p> <ol style="list-style-type: none"> 4. Positive interpersonal qualities lead to teamwork and cooperation in large and small groups in family, social, and work situations. 6. Information management focuses on the ability to access and use information obtained from other people, community resources, and computer networks. <p>Standard 3b: Core Business/Information System</p> <ol style="list-style-type: none"> 2. Business-Related Technology <p><i>Next Gen ELA/Literacy</i></p> <p>11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p>	

ADD-ON ACTIVITIES

- Interview a business owner in your community and write a blog post outlining their services, the role they play in the market, and their business model. What sets them apart from their competitors?

ADDITIONAL RESOURCES

- [Census Bureau Data](#)

Unit Two: Introduction to Business

Lesson Twelve: Facing the Public

OBJECTIVE

In this lesson, students will learn about the value of marketing to reach their target audience and explore strategies for implementing a marketing campaign for their food access business.

Learning Outcomes	
<p>Key Questions</p> <ul style="list-style-type: none"> • What is marketing? • What are some marketing strategies used by businesses? • How do farm owners apply marketing strategies? • What is storytelling in the context of a business? 	<p>Students will...</p> <ul style="list-style-type: none"> • Understand how marketing impacts us daily. • Learn about different marketing strategies. • Learn about counter marketing. • Apply marketing strategies and storytelling to their farm business plan.
<p>NYS Standards</p> <p><i>Career Development and Occupational Standards (CDOS)</i></p> <p>Standard 2: Integrated Learning Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings</p> <p>1.Integrated learning encourages students to use essential academic concepts, facts, and procedures in applications related to life skills and the world of work.</p> <p>Standard 3a: Universal Foundation Skills Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace</p> <p>4. Positive interpersonal qualities lead to teamwork and cooperation in large and small groups in family, social, and work situations.</p> <p>Standard 3b: Core Business/Information System</p> <p>1.Basic Business Understanding</p> <p>3.Information Management/Communication</p> <p><i>Next Gen ELA/Literacy</i></p> <p>11-12.RST.2 Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms.</p>	

ADD-ON ACTIVITIES

- Make a logo for your food access business that conveys the goals and mission behind the project. Use [Canva](#) to design multiple drafts and vote as a class on which logo you will use for your marketing materials. To learn about how to create a logo in Canva, watch [this video](#).

ADDITIONAL RESOURCES

- [The 4 Ps of Marketing](#)
- [The True Cost of Food Presented by The Sierra Club National Sustainable Consumption Com - YouTube](#)

- [Countermarketing Hub](#)