

Summary

Unit One addressed the big picture of labor market realities—which industries are growing, which are shrinking, and technology’s impact on the market. Students learned about a wide range of careers in the Food Production sector and which subsectors have the most plentiful jobs in their region. They learned about the industrialization of Food Production throughout history, how our food gets from the farm to our table, and examples of careers available at each stage of the food system. Students also learned about cutting edge technology that is changing the way our food is grown and manufactured.

Unit Two addressed the inner workings of the job-seeker. What are her interests and passions? What kind of work environment will she enjoy? What careers should she consider based on what she knows about herself and what factors might influence someone making a career change? Students also learned to navigate career database websites, assess their own interests and conduct a group research project about careers in the Food Production sector.

In **Unit Three**, students’ research became personalized. They heard from Food Production workers themselves, through firsthand accounts and interviews from workers in text and video, and discussed what they learn. They developed informational interview questions and conducted further research on Food Production careers of interest.

In **Unit Four** students considered what it takes to prepare for a career in Food Production. They learned about common career pathways in the industry and considered how career movement happens in Food Production careers. What kinds of training and education opportunities are available for someone interested in this field? Students got a taste of training and learned about the importance of sanitation through reading a food safety training manual from a Food Production facility.

Summary

In **Unit Five**, students learned about what Food Production employers are looking for in new hires and how to leverage their networks to find jobs. They analyzed help wanted ads and engaged with a panel of Food Production professionals. They also learned how to become food entrepreneurs and practiced using online resources available to New Yorkers looking to become self-employed.

In **Unit Six** students learn about Food Production through the lens of a food consumer—which is everyone! They learn about making food choices, issues of equity in access to healthy food, and they meet food activists who are working to make nutritious food available to everyone. They also learn about how to take steps to meet their own nutrition goals and the impact of nutrition on our daily lives, including mental health and wellness.

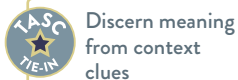
1 • WHY WE EAT WHAT WE EAT



Make inferences

Many factors contribute to a person's food choices, from geographic location to culture to socioeconomic status. Students explore several of the external factors that affect why we eat what we eat while practicing making inferences and responding to a text in writing.

2 • DEVELOPING A FOOD AND NUTRITION VOCABULARY



Discern meaning from context clues

Students use context clues to determine the meaning of food and nutrition vocabulary, then answer questions and write original sentences using the new terms.

3 • SENTENCE COMBINING: NUTRITIOUS EATING ON A BUDGET



Sentence combining

Students read and discuss an article containing expert advice on how to eat nutritiously on a budget. They then practice combining sentences from the article using coordinating conjunctions (also known as FANBOYS) and dependent clauses.

4 • SUMMARIZING: CONSUMER FOOD SAFETY



Summarizing

Students read an article about food safety in the home, practice summarizing the article in sections and write their own summary of the article.

5. MAIN IDEA AND SUPPORTING DETAILS: HOW MUCH FOOD DO WE WASTE?

Students read, annotate and discuss an article about the issue of food waste, then use a scaffolded graphic organizer to identify the main idea and supporting details. Finally, they write a journal entry in response to the article.



- Determine central idea
- Cite evidence from the text to support your analysis

6. DEVELOPING QUESTIONS ABOUT FOOD INSECURITY

Students learn about food insecurity, both as a general concept and how it affects people in New York City. They use a KWL (Know, Wonder, Learn) chart, develop questions about the text using sentence stems and respond in writing to their classmates' questions.

7. GUIDED NOTES: HUNGRY FOR CHANGE

Students watch a video about two young people in New York City who were inspired to become involved in making access to healthy food more equitable. They use guided notes and class discussion to analyze the video, practice note-taking, and ultimately write a response journal.

8. SENTENCE COMBINING: SPOTLIGHT ON URBAN AGRICULTURE

Students read and annotate an article about the rise of urban rooftop farming in cities like Chicago and New York. They discuss the article as a class and then practice combining sentences from the article using coordinating conjunctions (FANBOYS) and dependent clauses.



Sentence combining

9. INFORMATIONAL ESSAY: CAN WHAT YOU EAT AFFECT YOUR MENTAL HEALTH?

Students read an article about the effects of nutrition on mental health and write an informational essay, a kind of essay that appears on the TASC exam.



Informational essay

10. NYC FOODSCAPES: COMMUNITY FOOD ENVIRONMENT PROFILES*

Students read Foodscapes Community Profiles created by The New York City Food Policy Center at Hunter College (CUNY), which contain infographics and data for factors that contribute to a neighborhood's food environment. Students compare and contrast two different neighborhood food environment profiles while practicing a number of literacy and numeracy skills.



- Make inferences
- Sentence combining



- Summarizing
- Reading an infographic



Calculations with percents



*RAENs will provide regional adaptations.



45 MINUTES



Make inferences

Why We Eat What We Eat

Many factors contribute to a person's food choices, from geographic location to culture to socioeconomic status. Students explore the many external factors that affect why we eat what we eat.

PREP

- Be prepared to discuss food choice and recommendations in a non-judgmental way. Some rules of thumb:

- **Refrain from talking about food choices as “good” or “bad.”** Instead, use language that frames food choices in terms of how they align with personal goals. Does this food choice get you closer to or further away from your personal nutritional goals?
- **Celebrate cultural diversity in food choices.** You may have students that represent a variety of cultural backgrounds. Food is an essential part of any culture. Encourage students to notice and respect the cultural differences among their food choices, even if they themselves would not make the same choices. For example, a student might choose a vegan diet or a diet that centers around meat based on their cultural or religious background.
- **Healthy bodies come in all shapes and sizes.** There are misconceptions that people who are not thin are not healthy or that everyone who is not thin should want to or needs to lose weight. What's most important is that everyone has knowledge about and access to a variety of nutritious foods and is able to make their own choices based on their personal needs and goals. It's also important that people are not shamed for the size or shape of their bodies.
- **Be aware that food choice depends on access to different kinds of foods,** which is often determined by someone's race, gender, and socio-economic status.

* This activity is adapted from the Foodspan Learning Curriculum from Johns Hopkins Center for a Livable Future. Additional activities can be found at <http://www.foodspanlearning.org/>

- **For launch activity:** Write the following statement on the board: **Individuals are responsible for their own food choices.** If possible, label one side of the room (either on the board or with chart paper on the wall) “*Agree*” and the other side of the room “*Disagree*.”

- 6 Ask students to get into groups of 3 and discuss the following question for 2-3 minutes: **Why do we eat what we eat?**

Someone in each group should take notes to be shared with the class.

- 7 While students are talking, write the following categories on the board from the *Influences on Food Choice* handout:

- a. *Policy Environment*
- b. *Physical Environment*
- c. *Social Environment*
- d. *Individual Factors*

- 8 When groups are finished, distribute the *Influences on Food Choice* handout. Explain that our food choices are influenced by factors such as taste preferences and knowledge (individual factors), people and culture (social environment), food availability and food marketing (physical environment), and government policies (policy environment). Cite an example for each category, writing the example into the category on the board. Refer to the *Influences on Food Choice* teacher's guide for examples. Ask students to describe why they think each example belongs in its respective category.

- 9 Ask students to now share some of their responses from their group discussion with the whole class. Ask students which category from the handout they think each of their responses belongs in and why. List student responses on the board according to category. It can also be helpful to ask students to give an example from their own life or background knowledge that illustrates each response. This will help students connect larger influences on food choice to their own environment. Have students take notes from the board on their handouts, filling in each category.

- 10 Distribute the *Food Environment Scenarios* handout and ask students to read John's Food Environment scenario silently to themselves. Next ask a volunteer to read the scenario aloud and then discuss the scenario as a class. Some sample questions might include:

- What is John's food environment like? How do you know?
- How is it similar to or different from your own?
- What do you think John might eat for breakfast? What about lunch or dinner? What makes you think that?
- What specific factors in John's environment influence his food choices?
- What barriers might prevent him from eating nutritious meals?

Teachers can choose a food that John might not have access to (geographic reasons, for example), and ask students to explain why this food item would or would not be something John would likely eat.

- 11 In pairs, ask students to complete the activities for John's Food Environment. When pairs are finished, have a few volunteers share their answers with the class. Discuss their answers and clarify any questions.
- 12 Ask students to complete Lydia's Food Environment on their own. When students are finished, ask volunteers to share their answers with the class. Discuss their answers and clarify any questions.
- 13 **Ask:** What are the differences between the two food environments? What could be done to improve each food environment?
- 14 Ask students to describe the food environment in their neighborhood using these questions as a guide:
 - What foods are available in your neighborhood?
 - Does your neighborhood have grocery stores, and do they have healthy options?
 - Does your neighborhood have farmers markets and/or community gardens?
 - Do residents buy food from nearby stores or restaurants?
 - What food or health advertisements do you see in your neighborhood?
- 15 **Ask:** Have you noticed changes in your neighborhood food environment in recent years? If so, what are the changes? What kind of effects do the changes have on the people who live there?
- 16 Working in small groups, have students brainstorm how changes in their neighborhoods' food environment could promote more nutritious diets.
- 17 Revisit the question from the beginning of the lesson. Ask students to respond in writing for two minutes: **Are individuals responsible for their own food choices? Why or why not? Has your answer changed since the beginning of the lesson?** If time allows, have volunteers share their responses.

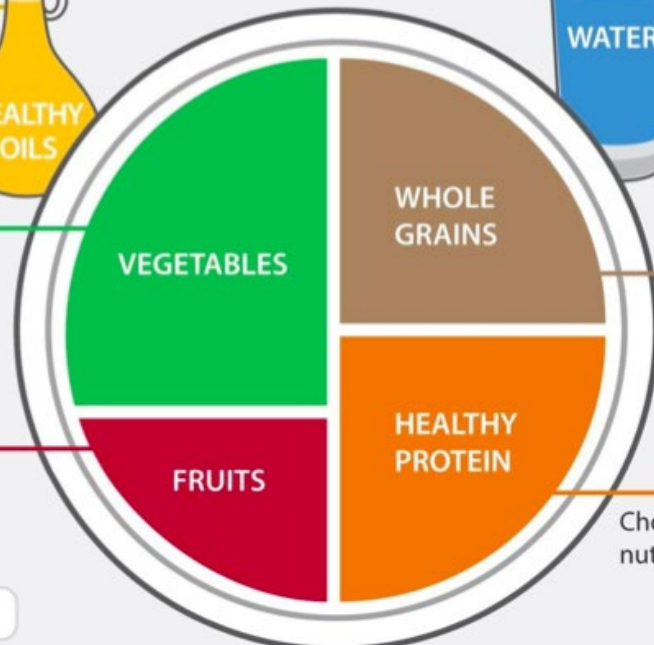
HEALTHY EATING PLATE

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.



Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.



Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

Eat plenty of fruits of all colors.

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.



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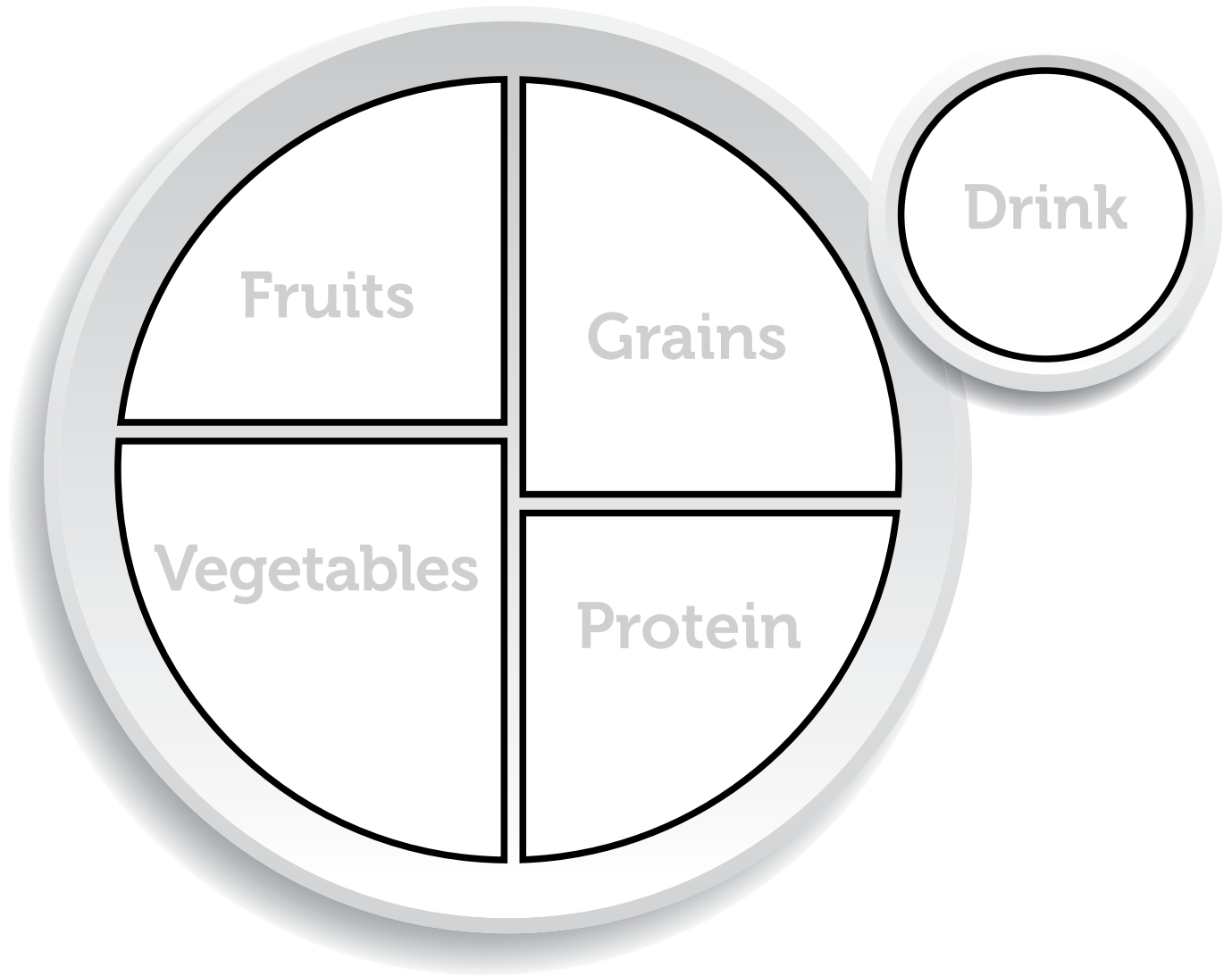
Harvard School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource

Harvard Medical School
Harvard Health Publications
www.health.harvard.edu

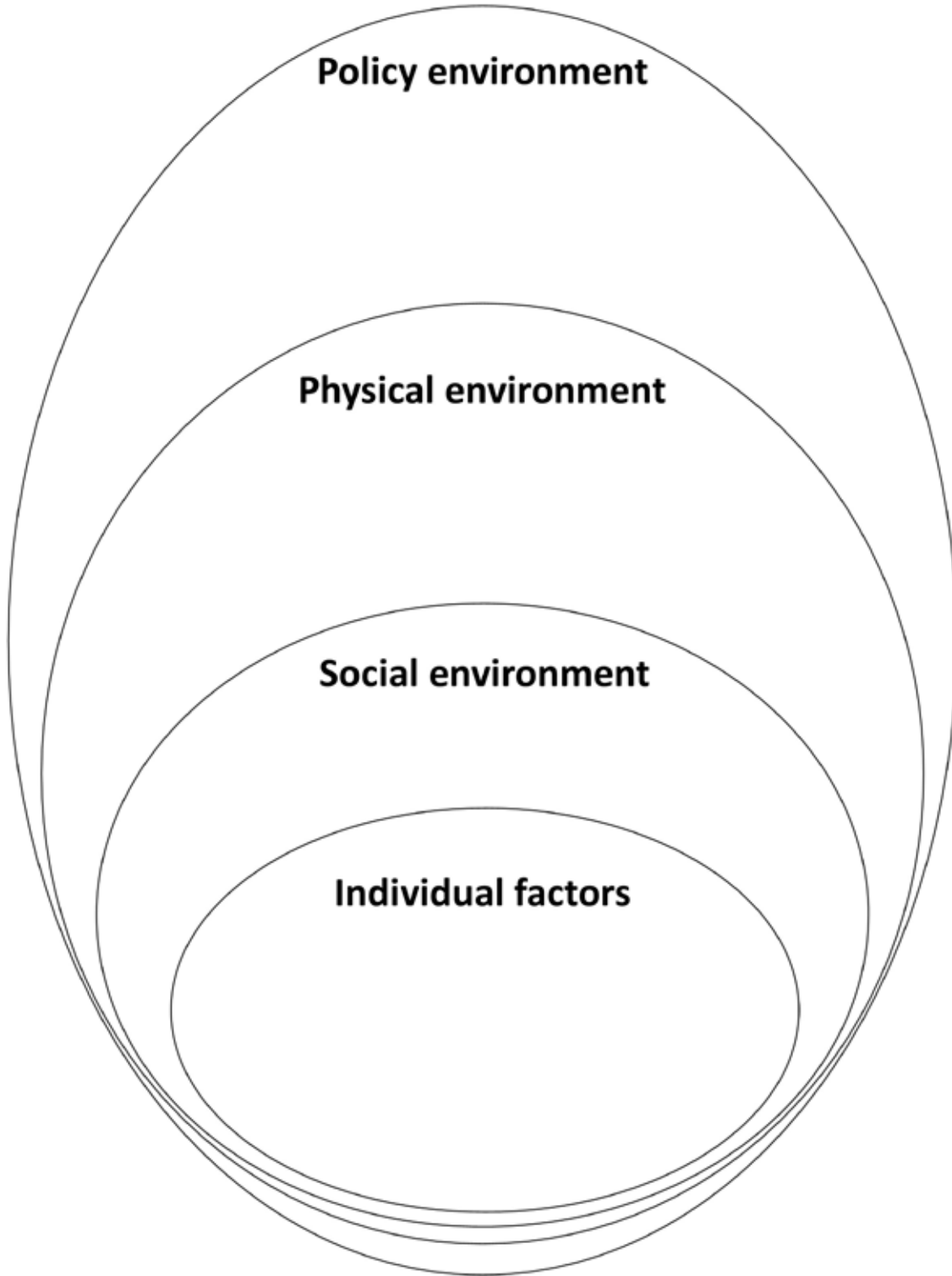


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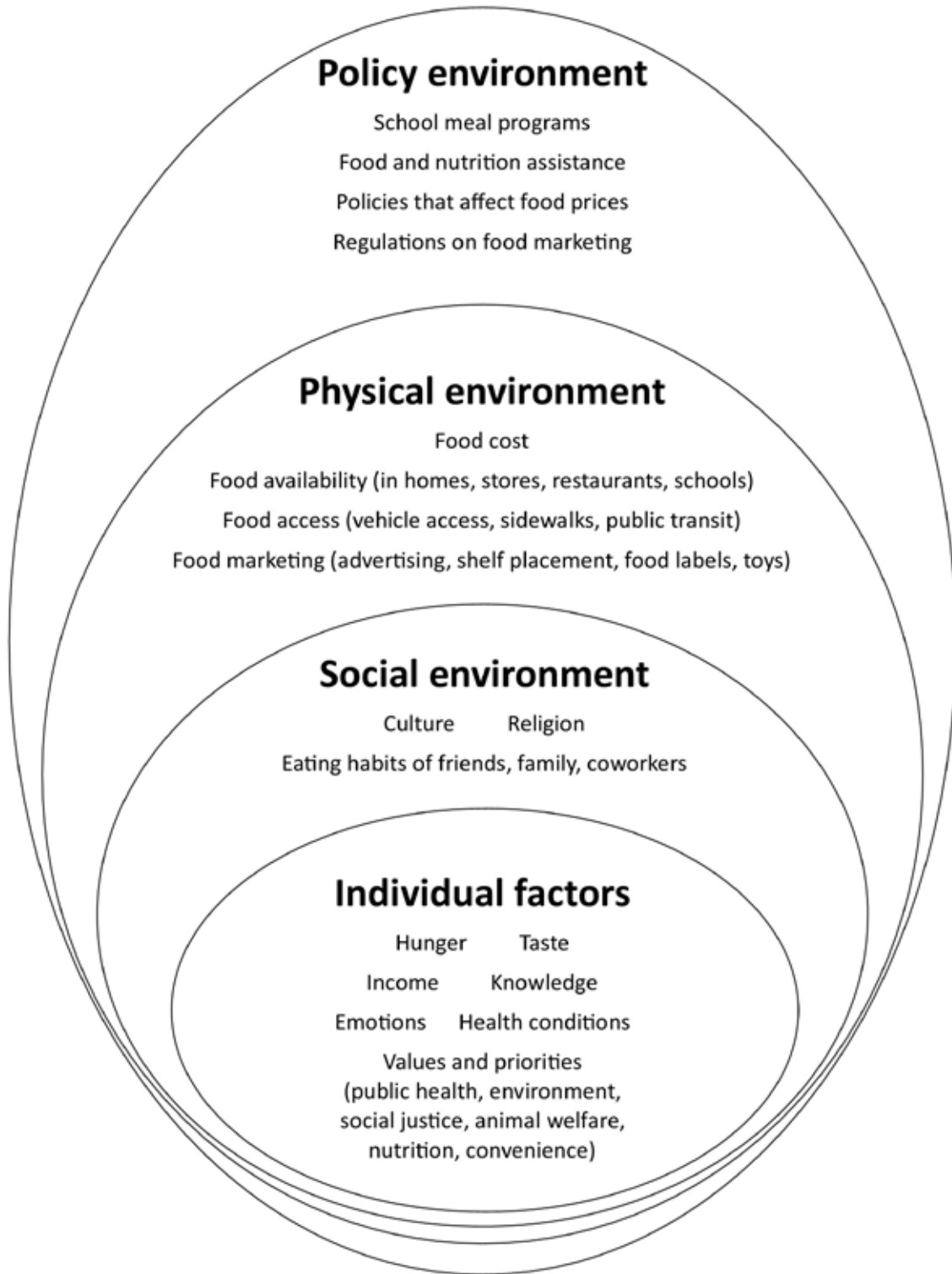
HEALTHY EATING PLATE (EMPTY)



INFLUENCES ON FOOD CHOICE



INFLUENCES ON FOOD CHOICE TEACHER'S GUIDE

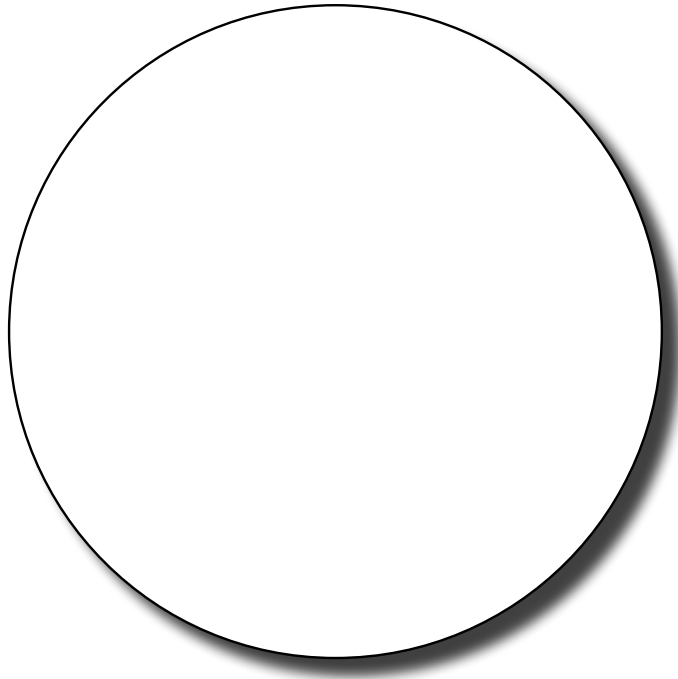


FOOD ENVIRONMENT SCENARIOS HANDOUT**John's Food Environment**

John lives near a small town in a rural farming community. His parents produce and sell vegetables on their family farm, and they raise chickens to sell eggs. They sell their produce at several farmers' markets in nearby towns. John's parents do not have a large income, and they produce as much of their own food as possible. When their food supplies run out, they must drive 30 miles to a general store that has limited options.

What would John eat for dinner?

Draw or describe what might be on John's dinner plate:

**Why does John eat what he eats?**

Give examples of how John's social and physical environment might affect his food choices:

Social environment	Physical environment

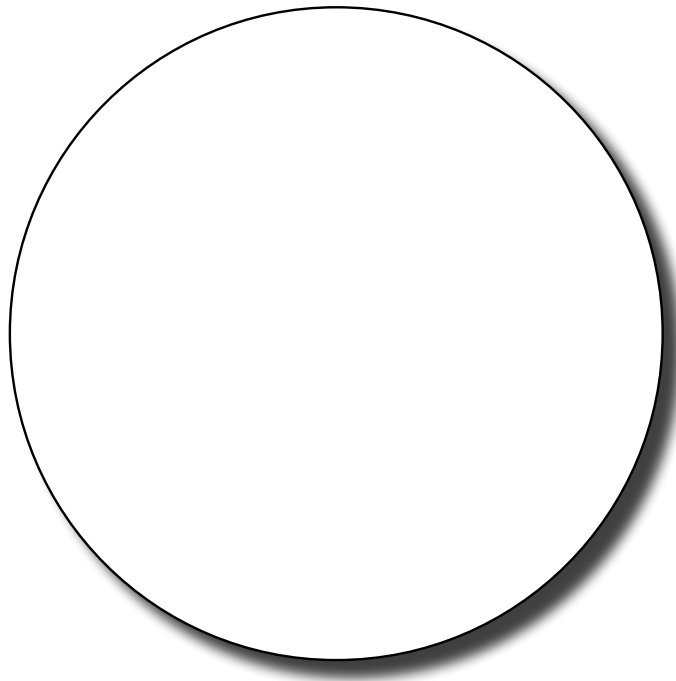
FOOD ENVIRONMENT SCENARIOS HANDOUT

Lydia’s Food Environment

Lydia and her family, immigrants from Central America, live in a large city. Her parents are rarely home from work in time for dinner, so Lydia often eats alone in front of the television. Her father uses the family car to get to work, so Lydia stays within walking distance to get meals. Though her parents encourage her to eat fruits and vegetables, there is no grocery store near her family’s apartment. There are a couple of corner stores, which sell microwavable snacks. Her friends often meet up to eat at the only nearby restaurant.

What would Lydia eat for dinner?

Draw or describe what might be on Lydia’s dinner plate:



Why does Lydia eat what she eats?

Give examples of how Lydia’s social and physical environment might affect her food choices:

Social environment	Physical environment



70 MINUTES

Developing a Food and Nutrition Vocabulary



Discern meaning from context clues

Students use context clues to determine the meaning of food and nutrition vocabulary, then answer questions and write original sentences using the new terms.

VOCABULARY

nutrient

protein

serving size

daily value

cholesterol

saturated fat

organic

PREP

- Be prepared to define and discuss vocabulary terms: **nutrient, protein, serving size, daily value, cholesterol, saturated fat, organic**. Refer to *Developing a Food and Nutrition Vocabulary* worksheet for the definitions of these items and sample sentences.
- You may want to prepare additional sample sentences for each vocabulary word to aid in discussion and comprehension.

MATERIALS

- *Nutrition Facts Label* image
- *Developing a Food and Nutrition Vocabulary* worksheet

EXPLAIN

- 1 Everyone interacts with the Food Production industry because we all have to eat.
Ask: During an average day or week, where are the different kinds of places you buy food to eat? How do you decide which food to buy? What factors determine your decisions?
- 2 Show (project or distribute) *Nutrition Facts Label* image.
Ask: What is this a picture of? Where do you encounter them? Why do some people read nutrition labels? Why might reading nutrition labels be important?
- 3 Today we're going to learn and practice some food and nutrition vocabulary that can be useful when you are thinking about making food choices.
- 4 Distribute *Developing a Food and Nutrition Vocabulary* worksheet and ask students to work on Part I in pairs.

- 5 When pairs are finished, they can move on to completing Part II without their partner.
- 6 When students are finished, ask volunteers to share their answers and discuss them as a class. Clarify students' understanding of the vocabulary and offer additional sample sentences if necessary.

Developing a Food and Nutrition Vocabulary

PART I: For each word, read the definition and then complete the exercises that follow.

- 1 Nutrient:** A substance in foods that the body needs to regulate bodily functions, promote growth, repair body tissue, and obtain energy. Examples of key nutrients the body needs are proteins, vitamins (A, C, D), and minerals (iron, potassium, magnesium).

Example Sentence: Sara chose the whole grain bread over the white bread because it has more nutrients in it and she is trying to make more nutritious food choices.

Complete the following sentences:

Foods that are nutritious contain **many** / **few** (*circle one*) nutrients important for our body's health and well-being.

Children require a diet high in **nutrients** because _____

My doctor told me that I wasn't getting enough **nutrients** in my diet and suggested I eat

- 2 Protein:** Provides energy, builds muscle, assists in the growth and repair of body tissue, and proper blood function. High protein foods include meats, eggs, poultry, milk and milk products. Nuts, dried beans, dried peas and lentils also contain a lot of protein.

Example Sentence: Eggs are a good source of protein, which is why many people like to eat them in the morning so they have energy for the day ahead.

Complete the following sentence:

Someone who has been injured might be told to eat more **protein** because

Write a sentence describing a meal you've eaten that was high in **protein**.

- 3 Serving Size:** A term that indicates a fixed amount of food, such as 1 cup or 1 ounce. The serving size for packaged foods is usually shown on the nutrition labels. Serving size can help you decide how much of a particular food you should eat at a time and what amount of nutrients you are getting from that food.



Example Sentence: The serving size for the apple juice was 8 ounces and it contained 17 grams of sugar per serving. Cynthia didn't want to consume more than 20 grams of sugar at a time, so she made sure to only pour herself one serving.

Why is it useful to read the **servicing size** on the nutritional labels of the food you buy?

Is **servicing size** something you usually pay attention to when grocery shopping? Why or why not?

- 4 Daily Value (DV):** Nutritionists recommend a certain amount of key nutrients per day. This is referred to as the daily value (DV), and nutrition labels generally have the DV of a particular nutrient expressed as a percentage (per single serving size). DVs are designed to help consumers plan a nutritionally balanced diet.

Example Sentence: The one serving of spinach I ate this morning contained 20% of the daily value of vitamin D, so I will need to eat other foods high in vitamin D today if I want to get 100% of the recommended amount for good health.

Complete the following sentences:

If a Nutrition Facts label lists Calcium as "15%," it means that _____ serving of that food contains _____ percent of the calcium you need each day.

Three foods that have a high **daily value** of vitamin C are _____, _____, and _____.

- 5 Cholesterol:** a waxy, fat-like substance found in every cell of humans and animals. Your body needs cholesterol to make hormones, vitamin D, and substances that help you digest foods. Your body makes all the cholesterol it needs. However, cholesterol is found in some of the foods you eat. Having high cholesterol can increase your risk of heart disease. Foods like milk, meat, butter, and cheese are high in cholesterol. Fruits, vegetable and grains do not have any cholesterol.

Example Sentence: My dad's doctor said he has early symptoms of heart disease, so he has to stop eating foods that are high in cholesterol, like salami, beef, or cheese.

Put an X next to the foods you should eat if you are trying to lower your cholesterol levels.

- | | | |
|-------------------------------|-------------------|----------------|
| ___ brown rice | ___ lentil soup | ___ hamburgers |
| ___ salad w/ low fat dressing | ___ french fries | ___ steak |
| ___ apples | ___ carrot sticks | ___ apple pie |
| ___ macaroni and cheese | ___ pizza | ___ salsa |

Write a sentence of advice to someone with high cholesterol.

- 6 Saturated Fat:** Fats that are solid at room temperature are considered saturated fats. They increase blood cholesterol levels and the risk of heart disease. Examples of foods that have high levels of saturated fats are meats, poultry skin, some oils (palm, coconut, etc.), and foods made from whole milk (cream, cheese, etc.).

Example Sentence: Experts say we should limit the amount of saturated fat we eat, like those found in red meat and butter because they are bad for our hearts.

Complete the following sentences:

When reading a nutrition facts label, you should look for foods _____ in saturated fat because

Potato chips contain a **high / low** (*circle one*) amount of saturated fat. This is because _____

- 7 Organic:** Foods that are produced without the use of chemical fertilizers, pesticides, or other artificial agents. Organic foods are beneficial to consumers because they are free from chemicals that can cause harm to bodies. Organic farming is beneficial to farms because the land remains healthier without the use of chemicals.

Example Sentence: I try to buy organic meat when I can afford to because I read that the hormones used in some meat can be harmful to your health.

Do you think organic farming is better for the environment? Why or why not?

Write a sentence about the availability of organic fruits and vegetables in your neighborhood.



PART II: For each of the vocabulary words, write an original sentence using the word that demonstrates the meaning of the word.

1 Nutrient: _____

2 Protein: _____

3 Serving Size: _____

4 Daily Value: _____

5 Cholesterol: _____

6 Saturated Fat: _____

7 Organic: _____



Nutrition Facts Label

Nutrition Facts/Datos de Nutrición	
8 servings per container/8 raciones por envase	
Serving size/Tamaño por ración	2/3 cup/2/3 taza (55g)
Amount per serving/Cantidad por ración	
Calories/Calorías	230
	% Daily Value*/Valor Diario*
Total Fat/Grasa Total 8g	10%
Saturated Fat/Grasa Saturada 1g	5%
<i>Trans Fat/Grasa Trans</i> 0g	
Cholesterol/Colesterol 0mg	0%
Sodium/Sodio 160mg	7%
Total Carbohydrate/Carbohidrato Total 37g	13%
Dietary Fiber/Fibra Dietética 4g	14%
Total Sugars/Azúcares Total 12g	
Includes 10g Added Sugars/Incluye 10g azúcares añadidos	20%
Protein/Proteínas 3g	
Vitamin D/Vitamina D 2mcg	10%
Calcium/Calcio 260mg	20%
Iron/Hierro 8mg	45%
Potassium/Potasio 235mg	6%
<p>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</p> <p>* El % Valor Diario (VD) le indica cuánto un nutriente en una porción de alimentos contribuye a una dieta diaria. 2,000 calorías al día se utiliza para asesoramiento de nutrición general.</p>	

Sentence Combining: Nutritious Eating on a Budget



60 MINUTES

Students read an article containing advice from nutrition experts on how to eat nutritiously on a budget. They discuss the article as a class, then practice combining sentences from the article using coordinating conjunctions (otherwise known as FANBOYS) and dependent clauses.



Sentence combining

PREP

- Read and be prepared to discuss the article, *Nutritious Eating on a Budget*
- Be prepared to explain vocabulary terms: **nutritious**, **cost-effective**, **bulk** and **bang for your buck**.
- Students should be already familiar with or teacher should be prepared to introduce sentence combining techniques including using FANBOYS and dependent clauses.

MATERIALS

- *McDonald's vs. Grilled Chicken* image
- *Nutritious Eating on a Budget* article
- *Sentence Combining* handout
- This activity is best with a computer and projector

EXPLAIN

- 1 Project the *McDonald's vs. Grilled Chicken* image or distribute printed copies of the image. **Ask:** What do you see? What are the advantages and disadvantages of purchasing and eating each of these meals? Some examples:
 - A. Big Mac and french fries from McDonald's
 - › *Advantages:* Cheap, fast, convenient, tastes good, familiar, filling
 - › *Disadvantages:* Processed food, low quality of meat, tastes bad, unfamiliar
 - B. Grilled chicken breast with asparagus and sweet potatoes
 - › *Advantages:* Nutritious, fresh, tastes good, familiar
 - › *Disadvantages:* More expensive than fast food, takes time and effort to cook (if you buy at the market and prepare it yourself), tastes bad, unfamiliar

VOCABULARY

nutritious

cost-effective

bulk

bang for your buck

- 2 Distribute *Nutritious Eating on a Budget* article and ask students to read the title. **Ask:**
 - What do you think this article is going to be about? How do you know?
 - Who do you think “the experts” might be? What makes you think that?
 - Can you predict some tips for nutritious eating on a budget that you think might be in the article?
- 3 Ask students to read and annotate the article. First students should mark anything they think is interesting, important, confusing, or surprising. They should circle unfamiliar words and write any questions they have in the margins. Then students should mark any advice in the article they think might be useful in their own lives and make a note of why. If they read something they don’t think would work for them, they can make a note of this too.
- 4 Divide students into groups of threes. Ask students to discuss what they just read together and answer the following questions:
 - What did you notice in the article? (write down as many things as you can)
 - What did you read that interests you?
 - What do you want to know more about?
 - Was anything confusing? What do you have questions about? (be specific)

For guidance on teaching **annotation**, see “How to Teach Annotation” in the User’s Guide, found at www.tinyurl.com/cunycareerkits.

DISCUSS

Discussion Guidelines

Facilitate a discussion in which students share what they talked about in groups and also ultimately discuss:

Content

- Who are the experts that the author talks to? Why are they important?
- How would the article be different if the author had interviewed average people on the street about the same topic? Do you think you would find the article more or less helpful? Why?

Vocabulary

- For example, what does the author mean when she says, “Despite the popular perception, processed food will often cost more than food you cook yourself”? What is popular perception?

Purpose

- What is the purpose of the article? Do you think the article achieves its purpose successfully? Why or why not?

Structure and Organization

- The author begins the article with a story from her own life. What is it?

- What is her purpose in telling the story? Is she effective? How do you know?
- How would the article have been different if the author told the story about her life at the end instead of the beginning? Would it have been less/more effective? Why do you think that?

Making Connections to Personal Experience

- Do you think it's possible to eat nutritious meals on a budget? Why or why not?
- Did anything in this article change your mind about eating healthy? Explain.
- Which tips stood out to you as helpful, interesting, or something you'd like to incorporate into your own life? Why? What changes would you have to make in your life to incorporate them?
- Which tips seemed unrealistic, confusing, or something that wouldn't work in your own life? Why? What would have to be different for them to work?
- Any additional clarifying questions.

Students should back up their thinking with evidence from the article. Ask follow up questions that help students explain their thinking, delve more deeply into the questions, and cite evidence to support their responses. Some sample follow-up questions might include:

- › *How do you know that?*
- › *Where in the article do you see that?*
- › *Why do you think that?*
- › *What else do you notice?*
- › *Can you say more about that?*
- › *What do you think that means?*

EXPLAIN

- 6 Now we're going to use the new information we learned about nutritious eating on a budget to practice sentence combining, a skill that is important on the TASC exam. Combining sentences involves taking two or more short sentences with basic structure and combining them into one effective sentence. Learning how to combine sentences helps students become more versatile writers.
- 7 Distribute *Sentence Combining* worksheet. Introduce or review sentence combining techniques if necessary.
- 8 Students can work independently or in pairs to complete the handout. When students are finished, review it as a class.

McDonald's vs. Grilled Chicken



Top image: <https://www.mcdonalds.com/content/dam/usa/nutrition/items/evm/h-mcdonalds-Quarter-Pounder-with-Cheese-Extra-Value-Meals.png>

Bottom image: <http://www.sheknows.com/food-and-recipes/articles/816708/15-minute-quick-chicken-recipe-tips>



Photo © Qwart / Bigstock

Nutritious Eating on a Budget

By Julia Belluz

Adapted from <https://www.vox.com/2015/12/17/10326668/9-rules-for-healthy-eating>

I used to have a roommate who was an extreme budget eater. Dining in a restaurant was a rare event. He never drank coffee out of the house. He rarely ate meat. He'd make quarterly trips to bulk shops to stock up on frozen, canned, and other nonperishable goods like rice and lentils. But his food wasn't at all bland. He constantly experimented with new recipes, based on cookbooks borrowed from the library. Chicken biryani, French onion soup, saag paneer, Vietnamese noodles—he turned our tiny blue kitchen into a culinary lab.

Looking back, I realize we can learn a lot from Stephen. It's no secret that income and time can be barriers to buying and preparing healthy foods. But if you can find the time, far and away the most effective way to eat healthier on a budget is to cook at home.

Despite the popular perception, processed food, such as microwave meals or fast food, often costs more than fresh food you cook yourself. The downsides to cooking are time and convenience, but with some planning, there are things you can do to make cooking at home much easier and more cost-effective. I talked to food and nutrition experts, and here's what they told me about making nutritious, delicious food that's still fairly cheap:

page 1

1. Keep basics stocked

Before you start cooking more, there are a few basics you need on hand: oil, vinegar, salt, pepper, onions, garlic, and any other spices you like.

I'd also stock up on cans of tomatoes, tuna, and garbanzo beans (or other beans), pasta, rice, lentils, potatoes, frozen fruits and vegetables, and coffee and/or tea. If you have these things in your house, you can make very quick and healthy dishes without going to a grocery store all the time. (There are lots of lists of pantry essentials on the internet.)

2. Consider the nutritional bang for your buck

Adam Drewnowski, a nutritional scientist who has measured the nutritional value per dollar of food, noted that some healthy foods come really cheap. He found that fats, sugar, grains, potatoes, and beans were less expensive than meat, fish, and fresh produce. Milk products and eggs usually fall somewhere in the middle. Beans, grains, some fats (like avocado or olive oil), milk, and eggs are all rich in nutrients the body needs to grow strong and stay healthy. "Grains, sugars, and fats are inexpensive sources of calories," Drewnowski reasoned. "But nutrient-rich foods, such as like dairy, beans, and eggs, are inexpensive sources of key nutrients such as protein and important vitamins."

3. Eat less meat—and when you buy it, look for tough cuts

You can get plenty of protein from non-meat sources—beans and other legumes (peas and lentils, for example), tofu and eggs. They're also cheaper than meat and fish. If you do buy meat, look for tougher cuts (like beef brisket or skirt), which are generally less expensive, said *Dorito Effect* author Mark Schatzker: "They take longer to cook than middle cuts, but that investment of time yields incredible flavor and texture possibilities."

4. Buy in bulk

For the essentials that do not require refrigeration, like those listed in point 1, it's often much cheaper to buy larger quantities upfront—a big bag of rice, a couple of liters of oil—than to continually stock smaller portions. These kinds of non-perishable foods can be bought in bigger quantities because they have longer shelf lives than perishables such as meat and produce that can only last a week or two in the refrigerator before going bad.

5. Cook in bulk

This will save you time and money. Make a big pot of soup or tomato sauce on the weekend and eat it throughout the week. When you cook a meal one night, make a little extra for lunch or dinner the next day. Freeze meals for the future. Always try to get the most for your cooking time. Michael Pollan, the author of



the *Omnivore's Dilemma*, said, “Last weekend we made a very large batch of vegetarian chili. Whenever we are out late or working late and don’t want to reach for the pizza order or Chinese food delivery, we can go to the chili in our freezer.”

6. Don’t shy away from frozen fruits and vegetables

“Frozen raspberries and wild blueberries are as good as or better than the fresh stuff flown in from other states and countries during colder months, and way cheaper,” said Schatzker.

7. Make coffee or tea at home

Brewing your own cup in the morning costs a few cents. Buying it in a store costs anywhere from one to several dollars every day.

8. Season your food so that it tastes good

The reason restaurant food is so tasty is because it’s loaded with salt. But it’s unlikely that you’ll ever use as much at home as cooks use in restaurants. So don’t worry about this too much—season to your taste. If it means you’ll feel more satisfied and actually enjoy eating at home, that’ll go a long way for health. Schatzker also advised using onions and other plants from the same family, like garlic, leeks, scallions, and shallots, for flavor. “They are an incredible bargain when you consider how much flavor they bring to dishes.” Hot peppers are inexpensive and can add a nice kick, too, he suggested.

9. Replace soda and juice with water

Water is free! Sugary drinks offer little or no nutritional advantage and can be harmful in large quantities or if consumed often.

10. Don’t be scared of expiration dates or food that looks less than perfect

I’m not suggesting you eat rotten food, obviously. But Americans waste tons of perfectly edible food based on superficial reasons or confusion—throwing away bruised fruits or foods that haven’t actually gone bad. There are some foods you can eat past the expiration or best-by date. These dates are often a conservative estimate. Food can still be eaten as long as it isn’t rotten or spoiled. You can do a quick smell check or look for mold on food to see if it might still be ok to eat. Think before you throw away next time. •

page 3

Sentence Combining

Work independently or with a partner to combine the following sentences from the article.

According to each section, you will either use coordinating conjunctions/FANBOYS

("for," "and," "nor," "but," "or," "yet," and "so") or dependent clauses ("because" or "although")

to combine the sentences.

Sentence Combining with Coordinating Clauses (FANBOYS)

Combine each set of sentences from the article into one sentence using "and," "but" or "so."

The first set is done for you as an example.

SET 1

He never drank coffee out of the house.

He rarely ate meat.

He rarely ate meat, and he never drank coffee out of the house.

SET 2

Brewing your own cup in the morning costs a few cents.

Buying it in a store costs anywhere from one to several dollars every day.

SET 3

Food can still be eaten as long as it isn't rotten or spoiled.

Think before you throw away next time.

SET 4

You can get plenty of protein from non-meat sources.

They're also cheaper than meat and fish.



Sentence Combining Using Dependent Clauses

Now combine the following sentences into one sentence using “although” or “because.”
The first set is done for you as an example.

SET 1

Schatzker also advised using onions and other plants from the same family, like garlic, leeks, scallions, and shallots, for flavor.

They are an incredible bargain when you consider how much flavor they bring to dishes.

Schatzker also advised using onions and other plants from the same family, like garlic, leeks, scallions, and shallots, for flavor because they are an incredible bargain when you consider how much flavor they bring to dishes.

SET 2

This will save you time and money.

Make a big pot of soup or tomato sauce on the weekend and eat it throughout the week.

SET 3

Income and time can be barriers to buying and preparing healthy foods.

The most effective way to eat healthier on a budget is to cook at home.

SET 4

Food can still be eaten as long as it isn't rotten or spoiled.

Think before you throw away next time.



75 MINUTES



Summarizing

Summarizing: Consumer Food Safety

Students read an article about food safety in the home, practice summarizing the article in sections and write their own summary of the article.

PREP

- Read *Consumer Food Safety* article
- Be prepared to model summarizing using the think-aloud strategy described in Explain #8 - 11.
- Summarizing is an important skill to learn and often a difficult one for students to master. For tips on teaching summarizing, watch this video from the 2014 NYSED CUNY Teacher Leader Institute: https://www.youtube.com/watch?v=aonaHNdLGnE&feature=youtu.be&list=PLM0Ajq8FKzylvKCMcCT27g_IsdwCro0wx

MATERIALS

- *Consumer Food Safety* article
- *Summarizing with Food Safety* worksheet

EXPLAIN

- 1 Turn to a partner and discuss the following questions:
 - A. Name three things you do when buying food or cooking in your home in order to make sure your food is safe to eat.
 - B. Explain what each one is meant to prevent—why do you do them?
 - C. Where did you learn these safety measures?
- 2 Food Production workers at every stage of the food system have to follow strict safety guidelines to make sure your food is safe when it gets to you. But once you buy food in the store and take it home, it's up to you to keep it safe for eating. Distribute *Consumer Food Safety* article.
- 3 One of the most effective ways to predict the main idea of a text is to read and think carefully about the title before reading the text. **Why do you think this is?**

› **Sample answers:**

Writers often choose the title based on what the article is about, titles are meant to be clues or tiny summaries of the big idea of an article.

- 4 Facilitate a brief discussion doing a close read of the article's title. Possible questions include:
 - Based only on the title, what do you think this article will be mostly about? How do you know?
 - Do you think one of the supporting details in this article will be about the importance of hand-washing? Why or why not?
 - Do you think one of the supporting details will be about how much food Americans waste each year? Why or why not?
 - What other facts might the author include to support the main idea? How do you know?
- 5 Ask students to read and annotate the article. They should mark anything they think is important, interesting or confusing, and write any questions they have in the margins.
- 6 When students are finished, say: It is important to look closely at everything included in an article, such as pictures, captions, graphs, etc. **Why do you think this is? What does the picture under the title depict? What do you think it means? How do you know?**
- 7 Summarizing is an important skill and can help us find the main idea of an article. **What does it mean to summarize? Why do you think it's important to be able to summarize something you've read?**
 - A. *Summarizing is briefly stating what the article is about. A summary contains the big ideas without all the details.*
 - B. *To demonstrate that you understand what the article is about. So you can share what you learn with others in a quick and concise way.*
- 8 We are going to practice summarizing small sections of this article. I'll do the first two sections so you can see how I summarize when I read. And then you'll try summarizing the remaining sections. Distribute *Summarizing with Food Safety* worksheet.

NOTE: Alternately, if you have modeled summarizing before, students can work to summarize all the sections independently.

For guidance on teaching **annotation**, see "How to Teach Annotation" in the User's Guide, found at www.tinyurl.com/cunycareerkits.

- 9 Teacher reads first section of the article aloud and then does a think aloud, demonstrating how she would summarize this section in 1-2 sentences.

› **Sample think aloud:**

Hmm. If I wanted to summarize this paragraph quickly for someone who has never read it, I need to figure out what the biggest or most important ideas are. I think the most important ideas here are: Food and cooking at home are important to people and their loved ones. Food can get contaminated with harmful bacteria and make people sick. The four basic food safety measures are: Clean, Separate, Cook and Chill. If I were to summarize those ideas in one or two sentences, I think I would combine them and say something like: Cooking food at home is an important part of people's lives, but can be dangerous if it becomes contaminated with harmful bacteria. Four basic food safety techniques can help keep people safe: Clean, Separate, Cool and Chill.

- 10 After modeling, ask students to describe step by step what you did.

› *You read the section to yourself. You figured out the most important or biggest ideas. You put those ideas together in your own words.*

What parts made it into my summary? What parts did I leave out? Why do you think I made those choices? Students can copy teacher's summary into their worksheet to keep as a model.

› **Sample answers:**

You only included the big ideas. You left out the names of all the bacteria and all the different kinds of people who are at a higher health risk. These are supporting details and a summary is only the big ideas.

- 11 Repeat this process for the second section.
- 12 Ask students to complete the remainder of the section summaries on their own. They should leave the last item on the worksheet blank for now. Point out that this article has subheadings which helps make summarizing in sections a little easier.
- 13 When students are finished, ask volunteers to share their summaries and invite the class to give feedback. Did the summary accurately describe the gist or the big idea(s) of the section? Why or why not? Was it missing anything? Did it include details that were too small or specific for a summary?

- 14 Ask students how they might use the same technique with an article that does not have subheadings.
- 15 If you were going to write a brief summary (3-4 sentences) about this entire article so that someone who didn't have time to read the entire article could get the gist of it, or know the most important overall ideas, how might you use your section summaries to help you do this?
- 16 Ask students to complete the worksheet by writing a 3-4 sentence summary of the article. Teacher should circulate and assist students in identifying the most important ideas that belong in an article summary.
- 17 When students are finished, discuss their article summaries and how the process of summarizing by sections helped in writing a summary of the entire article.
- 18 Referring back to their initial partner discussions about their own experiences with cooking and food safety, ask if there is anything new that they learned today and if there are any new food safety measures they plan to incorporate into their lives. **If so, which ones and why?**

Consumer Food Safety

Adapted from <https://extension.purdue.edu/pages/article.aspx?intItemID=27579>

Cooking at home can result in special meals and bringing people together to enjoy food. However, some unwelcome guests like Salmonella, E. coli, Staph aureus and Listeria can ruin an otherwise great meal. These are harmful bacteria that can grow in food and make people very sick who eat the contaminated food. According to the Centers for Disease Control, approximately 48 million people get sick with a foodborne illness every year, many of them from food prepared in their own homes. These tiny viruses, parasites and bacteria can make you and your loved ones severely ill. For vulnerable populations like pregnant women, young children, elderly individuals and people with compromised immune systems, these types of illnesses can be life-threatening.

There are four basic food safety measures that will help you keep the food prepared in your home safe and healthy. Just remember: *Clean*, *Separate*, *Cook* and *Chill*.

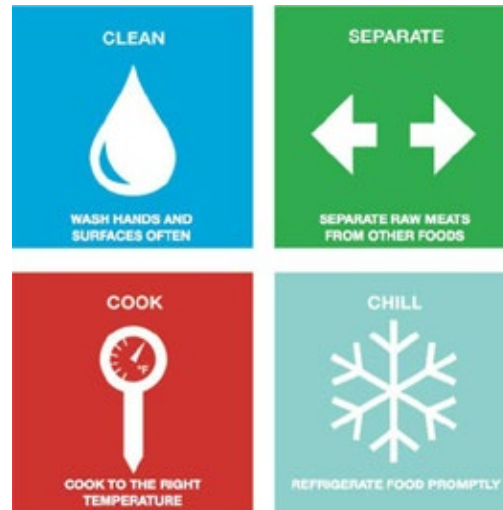


Image: <https://www.thekitchn.com/the-usdas-new-food-safety-camp-150544>

Clean.



Image: <https://www.foodsafetymagazine.com/magazine-archive1/februarymarch-2011/proper-hand-washing-a-vital-food-safety-step/>

Be sure to wash your hands with warm soapy water for 20 seconds before and after handling any food. It's a good idea to count slowly to 20, so you can be sure you're washing for the appropriate amount of time. If you know it, you can sing the Happy Birthday song twice all the way through while washing your hands—this adds up to 20



seconds! Wash all surfaces that will come into contact with food. This includes cutting boards, dishes, utensils and countertops. Always wash these items with hot soapy water before and after preparing each food item. It's always important to rinse fresh fruits and vegetables, including organic, under cool running water but never rinse raw meat or poultry before cooking! This practice is no longer recommended because it can potentially spread bacteria to sinks, countertops and nearby foods. Any harmful bacteria on the surface of raw meat or poultry will be killed when the appropriate internal temperature has been reached.

Separate.

Keep raw eggs, meat, poultry, seafood and their juices that can all carry harmful bacteria away from foods that don't require cooking, such as vegetables you plan to eat raw. Some kinds of bacteria can only be killed by heat when food is cooked, so it is important to keep these foods separate while shopping, when storing in the refrigerator and while preparing meals. If possible, use one cutting board for cooked foods and one for raw, so that the food that will not be cooked does not become contaminated with bacteria. Never place ready-to-eat or freshly cooked foods on an unwashed surface that has been exposed to raw animal proteins or their juices. This will help reduce your risk of getting sick and help you protect your family.



Right Zones in the Fridge
for safe food storage

Image: <https://blogs.extvt.edu/eatsmart-movemore/2017/02/16/safe-storage-perishable-foods/>

Cook.

Food is safely cooked when it reaches a high enough internal temperature to kill harmful bacteria. The best way to tell if meat, poultry and fish are cooked to a safe internal temperature is to use a food thermometer. To test if it is thoroughly cooked and safe to consume, insert a food thermometer into the innermost and thickest part of the meat. If you put stuffing inside the meat, make sure the internal temperature of the stuffing is at least the same temperature the meat needs to be. Below are the safe minimum internal temperatures for various kinds of meat and poultry according to the United States Department of Agriculture (USDA).

Product	Minimum Internal Temperature & Rest Time
Beef, Pork, Veal & Lamb Steaks, chops, roasts	145 °F (62.8 °C) and allow to rest for at least 3 minutes
Ground meats	160 °F (71.1 °C)
Ham , fresh or smoked (uncooked)	145 °F (62.8 °C) and allow to rest for at least 3 minutes
All Poultry (breasts, whole bird, legs, thighs, and wings, ground poultry, and stuffing)	165 °F (73.9 °C)

Chill.

The refrigerator is not just a safe place to store foods before and after cooking, it's also a safe place to thaw your frozen meat or poultry because of its consistent temperature of 40°F or less. The amount of time it takes to defrost depends on the weight of the meat. For example, when defrosting a turkey in the fridge, a good rule of thumb is one day per 4 pounds of bird. So, a 20-pound turkey can take up to five days to thaw in the refrigerator. If you forget to put your frozen meat or poultry into the refrigerator in time, you can finish defrosting it in the kitchen sink under cool running water or in the microwave. However, foods thawed using these two defrosting methods should be cooked immediately. Never defrost food at room temperature as bacteria thrive in these environments. Remember safe thawing is just as important as safe cooking.

After everyone has finished eating, refrigerate leftovers within 2 hours instead of leaving them out for people to nibble on. This not only reduces the chances of foodborne illness; it also reduces consumption of excess calories. Keep in mind that travel time is included in the 2-hour rule. So, if you are taking food you've prepared somewhere else, keep hot foods hot and cold foods cold during transportation and service. Always refrigerate leftovers and any type of food that requires refrigeration within 2 hours.

These four basic food safety measures can make the difference between a positive and negative experience for you and your family. •

Summarizing with Food Safety

Summarize the following sections of the article, *Consumer Food Safety*, in 1–2 sentences.

SECTION 1 Summary (Introductory paragraph)

SECTION 2 Summary (Clean)

SECTION 3 Summary (Separate)

SECTION 4 Summary (Cook)

SECTION 5 Summary (Chill)

Write a 3–4 sentence summary of the entire article. Include only the most important ideas. Do not include small details.



75 MINUTES

Main Idea and Supporting Details: How Much Food Do We Waste?



- Determine central idea
- Cite evidence from the text to support your analysis

Students read, annotate and discuss an article about food waste, use a scaffolded graphic organizer to identify the main idea and supporting details, and write a journal entry in response to a question about the article.

VOCABULARY

greenhouse gases
 food chain
 supply chain
 stocks
 make a dent
 retailers

PREP

- Be prepared to explain vocabulary: **greenhouse gases, food chain, supply chain, stocks, make a dent** and **retailers**.

From <https://helpsavenature.com/greenhouse-effect-for-kids>:

A greenhouse is a small glass house used to grow plants, especially in winter. The glass panels trap heat from the sun, and prevent it from escaping, keeping the plants warm enough to survive in the winter. Similarly, when the sun's rays travel through the Earth's atmosphere, which is made up of several layers of gases, and reach our planet, the surface, i.e., land, water, and biosphere, absorbs the solar energy. Gases like water vapor, carbon dioxide, nitrous oxide, methane, and ozone, which are present in the atmosphere, trap energy from the sun, and prevent the heat from escaping back into space. Though some of the energy passes back into space, most of it remains trapped in the atmosphere, which causes the Earth to heat up. These are known as greenhouse gases.

- This lesson discusses hunger as a result of poverty. Be aware that food and hunger can be sensitive issues for students, especially if they have experienced or are currently experiencing food insecurity or hunger.

MATERIALS

- *How Much Food Do We Waste?* article
- *Identifying Main Idea and Supporting Details* worksheet
- *Food Waste Journal Response* worksheet

EXPLAIN

- 1** One of the most effective ways to predict the main idea of a text is to read and think carefully about the title before reading the text. **Why do you think this is?**
 - › *Titles often have clues to what the text is about. Authors choose titles carefully to reinforce or extend the meaning of the article.*
- 2** Today we are going to practice identifying the main idea and supporting details of an article while learning about the issue of food waste. Distribute the *How Much Food Do We Waste?* article and ask students to read just the title of the article.
- 3** Facilitate a brief discussion doing a close read of the title. This is an important skill for students to learn. Both TASC and TABE exams include questions on text features, such as titles and headings. Possible questions include:
 - Based only on the title, what do you think this article will be mostly about?
 - Do you think one of the supporting details will be about how much food Americans waste each year? Why or why not?
 - Do you think one of the supporting details in this article will be about the importance of hand-washing in food safety? Why or why not?
 - What other facts might the author include to support the main idea? How do you know?
- 4** Ask students to skim the article. Skimming is an important strategy for reading comprehension. It helps students be able to predict the gist of what they are about to read, which can help guide their reading as they approach the article in its entirety. Review how to skim if necessary.

How to Skim an Article:

- Read the title
- Read the entire first paragraph
- Read the first sentence of every subsequent paragraph
- Read the entire last paragraph
- Develop a guiding question (see below)

- 5 Another strategy for reading comprehension is to read with guiding questions. These questions should be about a big idea (not a small detail) that they think will be answered by reading the article. Discuss what makes a good guiding question if necessary. As a class, brainstorm big questions that might be answered by reading the rest of the article. Help students choose a suitable guiding question together.
- 6 Ask students to read and annotate the article, trying to answer the guiding question. They should mark anything they think is important, interesting, confusing or surprising, and write any comments or questions they have in the margins.

For guidance on teaching **annotation**, see “How to Teach Annotation” in the User’s Guide, found at www.tinyurl.com/cunycareerkits.

DISCUSS

- First revisit the guiding question students chose and see what answers they were able to come up with. Then revisit their predictions based on the title and see how accurate they were.
- Next, ask questions that draw out the main themes of the article such as:
According to the article, why should we care about food waste?
- How is food waste different in countries where there isn’t much wealth in comparison to countries that have a lot of wealth, like the U.S. or Canada?
- Who did the article talk to about this difference? Why do you think these people were consulted? What makes them good people to talk to about this issue?
- What do the experts have to say about why there is such a difference in the amount of food wasted by different countries? What do you think about this?
- Ms. Rolle, from the Food and Agriculture Organization (FAO) said, “In a sense people don’t value food for what it represents.”
What did she mean by this? Do you agree with this statement?
Why or why not?
- What are some of the solutions to food waste discussed in the article?
Do you think they will be effective? Why or why not?
- Can you think of other ways food waste can be reduced or eliminated?
What kinds of steps would have to be taken in order to enact those ideas?
Are they reasonable? Why or why not?

EXPLAIN

- 7** Now that we've read the article closely and discussed our thoughts on it, let's try to identify the main idea and supporting details. Review how to distinguish main idea from supporting details if necessary. Distribute *Identifying Main Idea and Supporting Details* worksheet and ask students to complete it.
- 8** When students are finished, discuss their answers as a class. Be sure to ask students to explain why they chose their answers.
- 9** Distribute *Food Waste Journal Response* worksheet and ask students to write for 5-10 minutes (or however long teacher decides) in response to one of the journal prompts. Share and discuss their responses (optional).

How Much Food Do We Waste?

By Somini Sengupta, Dec. 12, 2017

Adapted from <https://www.nytimes.com/2017/12/12/climate/food-waste-emissions.html>

Globally, we throw out about 1.3 billion tons of food a year, or a third of all the food that we grow. That's important for at least two reasons. The less the world wastes, the easier it will be to meet the food needs of the global population in coming years. In America alone, one-in-six people currently do not have enough food to eat. Second, cutting back on waste could go a long way in helping the environment. Rotting food emits greenhouse gases, which contribute to global warming and hurt the planet. So how do we manage to waste so much?

In poor countries, most of the food waste is on the farm or on its way to market. In South Asia, for instance, half of all the cauliflower that's grown is lost because there's not enough refrigeration, according to Rosa Rolle, an expert on food waste and loss at the United Nations Food and Agriculture Organization (FAO). Tomatoes get squished if they are packed into big sacks. In Southeast Asia, lettuce spoils on the way from farms to city supermarkets. Very little food in poor countries is thrown out by consumers. It's too precious.



**A compost site
in Staten Island,
New York in**

2014

Credit: Jake
Naughton/The New
York Times

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But in wealthy countries, especially in the United States and Canada, around 40 percent of wasted food is thrown out by consumers. That number, from the Food and Agriculture Organization, is the result of several factors. First, we buy too much food. Second, we don't finish what is on our plates. And finally, we spend a much smaller share of our income on food. Paul A. Behrens, an assistant professor of energy and environmental sciences at Leiden University in the Netherlands, says that when people get higher income, they get more careless when it comes to food waste.

The United States as a whole wastes more than \$160 billion in food a year. According to the United States Department of Agriculture, which tracks food loss, dairy products account for the largest share of food wasted, about \$91 billion. According to some experts, roughly 50% of all produce in America is thrown away every year. "In the developed world, food is more abundant but it costs much less," Ms. Rolle said. "In a sense people don't value food for what it represents."

Ms. Rolle of the Food and Agriculture Organization said some of the most basic fixes are at the bottom end of the supply chain: Metal grain silos have helped against fungus ruining grain stocks in countries in Africa. In India, the F.A.O. is encouraging farmers to collect tomatoes in plastic crates instead of big sacks; they squish and rot less.

Higher up the food chain, supermarkets are trying to make a dent by changing the way best-before labels are used—making them specific to various food categories to discourage consumers from throwing out food that is safe to eat— or trying to sell bruised or misshapen fruits and vegetables rather than discarding them.

Some countries are trying to regulate food waste. France requires retailers to donate food to the hungry that is at risk of being thrown out but is still safe to eat. European Union lawmakers are pushing for more laws to prevent food waste by 50 percent by 2030, echoing a United Nations development goal; negotiations have been underway since June. Experts say food waste is a critical problem that needs to be addressed. •

page 2

Identifying Main Idea and Supporting Details

The text bank below contains the main idea of the article plus three supporting details. Fill in the blanks below with the appropriate excerpt.

Countries that have more wealth waste far more food than countries that do not because in wealthy countries, food is often easier to get and some people don't value it as much.	Food waste is harmful because as it rots, it emits greenhouse gases which are bad for the environment.
Food waste is a critical problem that the world must address so that less people go hungry and more is done to protect the planet. Some progress is being made, but more needs to be done.	Store owners in France are required by law to donate food that otherwise might be thrown away. This food is used to help feed hungry people.

MAIN IDEA:

SUPPORTING DETAILS:

1.

2.

3.



75 MINUTES

Developing Questions about Food Insecurity

Students learn about food insecurity, both as a general concept and how it affects people in New York City. They use a KWL chart, develop questions using sentence stems and respond in writing to a classmate's questions.

VOCABULARY

equitable
alleviate
systemic
stopgap

PREP

- Read and be prepared to discuss *What is Food Insecurity?* article
- Be prepared to explain vocabulary terms: **equitable**, **alleviate**, **systemic**, **stopgap**

MATERIALS

- *What is Food Insecurity?* article
- *KWL Chart* worksheet
- *Developing Questions About Food Insecurity* worksheet

EXPLAIN

- 1 Distribute *What is Food Insecurity?* article. Ask students to read the title of the article. **Ask:**
 - What does the word insecurity mean? How do you know?
 - Based only on the title, what do you think this article will be mostly about? How do you know?
- 2 Distribute *KWL Chart* worksheet and ask students to fill out the **K** and **W** columns, but leave the **L** column blank. They will fill out the **L** column after they read the article.
- 3 When students are finished, ask them to read and annotate the article, marking anything they think is interesting, important, confusing or surprising. They should circle unfamiliar words and write any questions or comments they have in the margins.
- 4 Next, distribute *Developing Questions About Food Insecurity* worksheet and explain that research shows that when people ask their own questions, they remember more of what they read. Ask students to complete the questions.

For guidance on teaching **annotation**, see "How to Teach Annotation" in the User's Guide, found at www.tinyurl.com/cunycareerkits.

Students should not answer the questions. Explain that when they are done, they will exchange papers and answer the questions a classmate has written. All questions must be able to be answered by reading the text. Their goal is write questions that will challenge their classmates.

- 5 When students are done writing questions, ask them to exchange papers with a partner and answer their classmate's questions. When they are finished, they should exchange papers back and correct their partner's answers.
- 6 When students are finished, ask them to revisit their *KWL chart*. Ask students to share how accurate their predictions were for what they would learn (**K** column) and if they learned anything about what they wondered (**W** column).
- 7 Ask students to fill out the **L** column of their *KWL charts*. When they are finished, ask for volunteers to share what they learned and briefly discuss any additional clarifying questions.

KWL Chart

K What I <i>Know</i>	W What I <i>Want</i> to Learn	L What I Have <i>Learned</i>



What is Food Insecurity?

Adapted from <https://hungerandhealth.feedingamerica.org/understand-food-insecurity/> and <https://www.ediblebrooklyn.com/2017/hunger-in-nyc-dips-but-remains-high-senate-tax-bill-to-increase-the-burden-on-the-hungry/>

In 2016, an estimated 1 in 8 Americans were food insecure, equating to 42 million Americans including 13 million children.

The U.S. Department of Agriculture (USDA) defines food insecurity as a lack of consistent access to enough food for an active, healthy life. It is important to know that hunger and food insecurity are closely related, but distinct, concepts. Hunger refers to a personal, physical sensation of discomfort caused by a lack of food. Food insecurity means someone does not have enough money to feed themselves or their families.



Photo © TeroVesalainen / Bigstock

Research shows food insecurity is a complex problem. People who experience food insecurity are low-income and also often experience multiple, overlapping issues like lack of affordable housing, social isolation, health problems, medical costs, and low wages, in addition to food insecurity. Many do not have what they need to meet basic needs and these challenges increase a family's risk of food insecurity. Effective responses to food insecurity will need to address these overlapping challenges.

Poverty and food insecurity in the United States are closely related. However, people living below the poverty line are not always experiencing food insecurity, and people living above the poverty line can experience food insecurity. Wages and critical household expenses (such as caring for an ill child or relative) can also affect food insecurity among people living in the United States.

Food Insecurity in New York City

Food insecurity in NYC has dropped 15 percent over the last six years but remains 15 percent higher than a decade ago before the recession, according to a recent report by Hunger Free America. Formerly the New York City Coalition against Hunger, Hunger Free America was founded in 1983 to enact the policies and programs necessary to end hunger in the U.S.

One in seven NYC residents, 1.2 million people in total, lived in food insecure homes between 2014 and 2016. Food insecurity has decreased sharply for children across NY state but has seen an increase for senior citizens. The Bronx has the highest rates of hunger among the five boroughs with one in four people experiencing food insecurity, while Manhattan is the least hungry borough.

Despite the decrease in hunger, city food pantries and soup kitchens – places where people in need can get free food - saw a 6 percent increase in usage in 2017 on top of additional increases over the past three years, and the groups are struggling to keep up with demand. “This report shines a light on the need for an overall change to the way that we approach hunger in America,” says Cassandra Agredo, executive director of Xavier Mission, a soup kitchen, food pantry and shelter in Manhattan. “A more fair and equitable wage structure, comprehensive job training and placement programs and an end to homelessness will all do far more to alleviate hunger than emergency food programs ever will.” In other words, simply providing free food to those in need does not solve the problems that create food insecurity in the first place. However, these kinds of charitable food programs are a critical stopgap while we work towards systemic change.

Nearly half of the adults who face food insecurity in New York state and city are employed. The number of “working hungry” is down slightly from last year, which Hunger Free America says is due to the increase in minimum wage state and city-wide. Nationwide, the nonprofit found that states who hike minimum wage are less likely to have workers struggling against food insecurity. •

page 2



Developing Questions About Food Insecurity

Use the following sentence stems to develop questions about the article *What is Food Insecurity?* Do not answer the questions. You will exchange papers with a classmate and answer each other's questions.

1 What is the difference between _____ and _____?

2 Why do you think _____ causes _____?

3 In your own words, what does _____ mean and how is it related to food insecurity?

4 Why does the article say _____?
And why is this important?

5 Write two questions about food insecurity in New York City.

1. _____

2. _____



90 MINUTES

Guided Notes: Hungry for Change

Students watch a video about two young people in New York City who were inspired to become involved in making access to healthy food more equitable. They use guided notes and class discussion to analyze the video, practice note-taking, and ultimately write a response journal.

NOTE: It is helpful, though not necessary, to have done the previous lesson which introduces the idea of food insecurity.

PREP

- Watch the video at <http://www.aljazeera.com/programmes/witness/2013/06/2013691925835901.html>.
- Review the *Hungry for Change: Guided Notes Teacher's Edition* and be prepared to discuss the video in segments (as noted by time markers) and as a whole.

MATERIALS

- *Hungry for Change: Guided Notes* worksheet
- *Hungry for Change Journal Response* worksheet
- *Hungry for Change: Guided Notes Teacher's Edition*
- This activity requires a computer with a projector and speakers.

EXPLAIN

- 1 Food is at the core of human survival—it can be at the heart of a family's traditions and an important part of a nation's cultural identity. In the United States—one of the richest countries in the world—we produce far more food than we need, and yet millions of people still go to bed at night hungry. Food insecurity happens to many different people in many different places. This includes people who are homeless or unemployed, as well as people who have homes and jobs, but still do not make enough to buy enough food for themselves or their families.
- 2 Today we are going to practice note-taking by watching a video about nineteen-year-old Chima, a Nigerian immigrant who lives in a shelter for homeless youth. In addition to being a student, Chima is also a food activist. Chima takes us on a journey through New York City to reveal what it means to be food insecure in America. In his own neighborhood, the Bronx, he shows

us what unhealthy food choices most of the poor must make each day and what kinds of solutions local food activists are working to provide. We will also learn about Molly, another food activist.

- 3** In order to practice note-taking while watching the video, I've prepared guided notes for you. I watched the video before class and took notes on ideas and information I thought were important. I then took out key words, phrases and ideas from my notes. Your job will be to fill in the missing information. But I don't want you to miss important information while watching the video because you are busy searching for the answers. So we are going to use a technique called watch-think-write. It has three steps:
 - 1.** We will watch the video with no writing allowed, but I will pause it every couple minutes.
 - 2.** We will then think and talk about what we just saw.
 - 3.** Then you will write the missing information from the video into the blanks.
- 4** Ask a student to explain the process and clarify any remaining questions about the process before you begin. Distribute *Hungry for Change: Guided Notes* worksheet. Point out to students that there are time markers for where we will pause the video to think and write.
- 5** Begin the video, reminding students they will have plenty of time to discuss and write after they watch. Stop the video at each time marker, as noted on the guided notes (both teacher and student versions). Prompt students to briefly discuss what they just saw using open ended questions such as:
 - What did you notice?
 - How could you tell? How do you know?
 - What else does this make you think of?
 - What did you see that interests you?
 - What information seemed important?
 - How do you know? Why did it seem important?
 - Can you relate something from your own life or something else you've seen/read?
 - What do you want to know more about?
 - What questions do you have?

- 6 Give students a few minutes to fill in the blanks on the *Hungry for Change: Guided Notes* worksheet. Students may want to see the clip again before moving on. Once students have finished writing, tell them to put down their pens and leave them on their desks until the class has viewed and discussed the next section. Continue viewing each section in this manner until the video is finished. Remind students to put their pens down when viewing each new section of the video.
- 7 When the video is finished, ask students to turn to a partner and discuss the following questions:
 - What is a food activist?
 - Why do you think Chima and Molly became food activists?
 - How have their lives changed since becoming food activists?
 - Do you think food activism has the ability to change a community long term? Why or why not?
 - What do you think the average person can do to help decrease food insecurity?
 - How does this video relate to your own life, your community, or city?
- 8 When students have finished their discussions, debrief the process of guided notes. Ask questions that encourage students to think about how this experience was similar to or different from taking notes on their own, and how that might be useful in the future. Questions could include:
 - How did watching the video and using guided notes affect your experience of the video? Was it easier or harder to understand the information? Explain.
 - How was it similar to the experience of taking notes on your own?
 - How was it different from taking notes on your own?
 - Since these were the notes I would have taken on the video, did you notice any patterns in the kinds of things that I wrote down?
 - Did anything stand out to you as something you might want to try the next time you take notes on a video?
- 9 Distribute *Hungry for Change Journal Response* worksheet and ask students to complete it. Students may share their responses with the class when they are finished.



Hungry for Change: Guided Notes

STOP: 1:15

New York City is in a “food crisis” because:

- Wealthier neighborhoods have _____
- Poor neighborhoods _____
- 3 million people in NYC are _____

Food insecure means _____

This video clip made me think about _____

This video clip made me wonder _____

STOP: 2:52

The Narrator, Chima, is from _____ and lives in a _____ because

In three months he will be too _____ to live in the _____.

He needs to get a _____ to college.

Why? _____

This video clip made me think about _____

This video clip made me wonder _____

STOP: 5:00

Chima has a hard time finding _____ from day to day. He mostly sees _____ in his neighborhood.

Chima used to work at _____. Seeing _____ while working there inspired him to _____.

Chima believes people in poor neighborhoods want to eat _____, but they often don't because _____

This video clip made me think about _____

This video clip made me wonder _____

STOP: 6:40

Chima started working at the _____ to get away from the abuse in his household. There he worked with _____ teaching them how to _____. This is how he learned to grow things too.

Chima considers himself a _____ activist. To help decrease food insecurity in his community, Chima now works with _____ gardens. These gardens are on otherwise unused land where people grow _____ to feed the community.

The number of Americans who cannot afford sufficient food includes 14 million _____.

This video clip made me think about _____

This video clip made me wonder _____

STOP: 10:25

Chima participates in a program called Teen Battle Chop Iron Chef. The purpose of this program is to

This is related to food insecurity and food activism because _____

In the homeless shelter where Chima lives, the residents _____ together at meal time like any family might.

I think the filmmaker included this information because _____

This video clip made me think about _____

This video clip made me wonder _____

STOP: 16:00

Chima is nervous about _____ because _____

Chima works with Molly, another food activist, in a program named Willow. The program is for young children who are living below _____. Willow teaches kids:

- _____
- _____
- _____

Molly is from a traditional _____ family. They eat many traditional foods from

Molly became inspired to become more involved in learning about food and food activism because

Molly's work as a food activist includes

- _____
- _____
- _____

People might not shop at the farmer's market because _____

This video clip made me think about _____

This video clip made me wonder _____

STOP: 22:00

Chima tries to talk to his friends/housemates about _____. Their response is

If Chima does not get into college, he will _____. What steps does he take to try to make this happen? _____

The benefits of community gardens are:

- _____
- _____
- _____
- _____

Personal benefits Chima has experienced from being a food activist and working in a community garden:

- _____
- _____
- _____

This video clip made me think about _____

This video clip made me wonder _____

PLAY UNTIL END

This video clip made me think about _____

This video clip made me wonder _____

Hungry for Change: Guided Notes TEACHER'S EDITION

STOP: 1:15

- New York City is in a “food crisis” because:
 - Wealthier neighborhoods have easy access to healthy/nutritious foods.
 - Poor neighborhoods have mostly fast food and bodegas. Non-nutritious foods.
 - 3 million people in NYC are food insecure.
- According to the video, food insecure means not having access to healthy food. These people might go to bed hungry at night.

STOP: 2:52

- The narrator, Chima, is from Nigeria and lives in a homeless shelter because his mother died, his father left, and his abusive uncle kicked him out of his house.
- In three months he will be too old to live in the shelter. He needs to get a scholarship to college. Why? So that he will have a place to live and be able to continue his studies.

STOP: 5:00

- Chima has a hard time finding food from day to day. He mostly sees fast food in his neighborhood.
- Chima used to work at McDonald's. Seeing the prevalence of obesity and how unhealthy the food was while working there inspired him to become a food activist so he can help people eat better in his community.
- Chima believes people in poor neighborhoods want to eat healthy food, but they often don't because they are mostly buying what they can afford and what is available to them.

STOP: 6:40

- He started working at the New York Botanical Gardens to get away from the abuse in his household. There he worked with younger kids teaching them how to grow things. This is how he learned to grow things too.
- Chima considers himself a food activist. To help decrease food insecurity in his community, Chima now works with community gardens. These gardens are on otherwise unused land in the city where people grow fresh fruits, vegetables, and herbs to feed the community.
- The number of Americans who cannot afford to sufficient food includes 14 million children.

STOP: 10:25

- Chima participates in a program called Teen Battle Chef. The purpose of this program is to teach kids how to cook and take healthy recipes back to their homes to share with their families. This is related to food insecurity because part of eating healthy is knowing how to prepare healthy meals.
- In the homeless shelter where Chima lives, the residents cook and eat together like any family might. I think the filmmaker included these two scenes because it helps us know more about what Chima's life is like so we can feel connected to him. (*answers may vary*)

STOP: 16:00

- Chima is nervous about getting into college because he hasn't heard back from schools yet. Also, his living situation and future education depend on it.
- Chima works with Molly, another food activist, in a program named Willow. The program is for young children who are living below the poverty line. Willow teaches kids about:
 - Fruits and vegetables
 - Farmer's markets
 - How to talk to parents about food
- Molly is from a traditional Bengali family. They eat many traditional foods from Bangladesh.
- Molly became inspired to become more involved in learning about food and food activism because she learned diabetes runs in her family and her doctor advised her to change her diet to prevent diabetes.
- Molly's work as a food activist includes
 - Teaching kids in Willow
 - Working at the farmer's market
 - Cooking for and talking to her family about nutritious food choices
- People might not shop at the farmer's market because they can't afford it.

STOP: 22:00

- Chima tries to talk to his friends/housemates about eating a balanced meal while eating out. Their response is mixed. One friend seems more open to the information than the other.
- If Chima does not get into college, he will not have a place to live. What steps does he take to try to make this happen? He continues to call the college admissions offices to follow up on his applications.
- The benefits of community gardens are:
 - Provide fresh produce for the community to eat
 - Allows young people who work in them to be able to give back to and strengthen the community
 - Teaches people how to grow their own food and be self-sufficient
 - Gives people a sense of accomplishment to be able to feed each other
 - Community can sell the produce at farmer's markets to get more money to buy seeds and keep the garden going ("a continuous cycle")
- Personal benefits Chima has experienced from being a food activist and working in a community garden:
 - Boosted his confidence
 - Learned how to communicate with others
 - Learned how to step up when the need arises and be a leader

PLAY TILL END

Sentence Combining: Spotlight on Urban Agriculture



60 MINUTES

Students read and annotate an article about the rise of urban farming on rooftops in cities like Chicago and New York. They discuss the article as a class, then practice combining sentences from the article using coordinating conjunctions (FANBOYS) and dependent clauses.



Sentence combining

PREP

- Read and be prepared to discuss the article, *Tending the Crops Sends Urban Farmers to the Roof*.
- Be prepared to explain vocabulary: **sustainability**, “**green**” (as in “being green” or “green movement”).
- Students should be already familiar with or teacher should be prepared to introduce sentence combining techniques including using coordinating conjunctions (FANBOYS) and dependent clauses. Coordinating conjunctions are often called FANBOYS. This is an acronym that stands for “for,” “and,” “nor,” “but,” “or,” “yet,” and “so.”

VOCABULARY

sustainability
“green”
(as in “being green” or “green movement”)

MATERIALS

- *Tending the Crops Sends Urban Farmers to the Roof* article
- *Sentence Combining with Urban Agriculture* handout

EXPLAIN

- 1 Have you ever visited or seen a farm in person? Or have you seen a farm on TV or in a movie? Where was it located?

In the country, rural areas.

- 2 Why are most farms in the countryside?

They require a lot of land, they require good soil and sunshine, cities are too crowded or polluted.

- 3 Today we’re going to learn about urban agriculture.

What do you think it means?

Urban agriculture refers to the growing of plants and raising of animals in and around cities.

What do you think some of the advantages or challenges might be?

List student responses in two columns on the board.

POSSIBLE ADVANTAGES:

People in cities can get fresh food

the food doesn't have to travel far to reach lots of people

some urban areas don't have access to much fresh produce

POSSIBLE CHALLENGES:

Lack of space

lack of healthy soil

pollution

lack of sunshine (sun blocked by big buildings)

For guidance on teaching **annotation**, see "How to Teach Annotation" in the User's Guide, found at www.tinyurl.com/cunycareerkits.

- 4 Distribute *Tending the Crops Sends Urban Farmers to the Roof* article and ask students to read and annotate it. While students read, they should mark anything they might add to the advantages or challenges lists on the board. They should also mark anything they find interesting, surprising, or confusing, circle unfamiliar vocabulary, and write any questions they have in the margins.
- 5 Divide students into groups of threes. Ask students to discuss what they just read together and answer the following questions:
 - What did you notice in the article? (write down as many things as you can)
 - What did you read that interests you?
 - What do you want to know more about?
 - Was anything confusing? What do you have questions about? (be specific)
- 6 Ask students to write down their group's answers to be discussed afterward as a class.

DISCUSSION GUIDELINES

Facilitate a discussion in which students share what they talked about in groups and also ultimately discuss:

- **Content**
 - › For example, According to the article, how did Chicago's move to start urban rooftop farming begin?
 - › Why do you think the mayor of Chicago was so excited to support urban agriculture in his city?
 - › Is urban farming very common in Chicago? How do you know?
 - › Recent years have seen growth in urban farming. According to the article, what has been a big factor in the growth of rooftop farms?

- **Vocabulary**
 - › *For example, The article uses the word “green” a lot, such as the “green list” or the “green rooftop movement.” What does “green” mean in this context?*
 - › *When the CEO of Gotham Greens said that New York and Chicago have the opportunity to “build upwards,” what did he mean?*
 - › *Who or what is Gotham Greens?*

- **Purpose**
 - › *For example, Why did the author write this article? What is the purpose of this article?*
 - › *What do you see in the picture? What did you learn about the picture from the caption? Why did the author include this picture in particular? Does it help you understand the text better? Why or why not? How would your experience of reading the article been different if the picture had shown just the face of an urban farmer?*

- **Structure and organization**
 - › *For example, Above the third paragraph it says, “The Windy City Leads the Way.” Why does it say this above the paragraph? What is this part of an article called? Why does the author use subheadings? What does the author mean by, “The Windy City Leads the Way.” (This could be replaced with any of the subheadings or asked for multiple subheadings.)*

- **Making connections to personal experience**
 - › *For example, Have you seen urban farming in your community? What has been the impact? If not, would you like to see urban farming in your community? Why or why not?*
 - › *What do you think a career in urban farming would be like? Would you be interested in urban farming? Why or why not?*

- **Revisit the advantages and challenges of urban agriculture**
 - › *For example, Did you find any more advantages of urban farming that we can add to our list? Did you find anymore challenges we can add to our list? Ask students to provide evidence from the article or their own knowledge/experience that explains their response. Can you think of any on your own that we haven’t discussed yet?*

- **The implications/takeaways**
 - › *Do we know what kind of impact urban farming will have on food production yet? Why or why not? Do you think that urban farming can have a big impact on food production? Why or why not?*

Students should back up their thinking with evidence from the article. Ask follow-up questions that help students explain their thinking, delve more deeply into the questions, and cite evidence to support their responses. Some sample follow-up questions might include:

- How do you know that?
- Where in the article do you see that?
- Why do you think that?
- What else do you notice?
- Can you say more about that?
- What do you think that means?

EXPLAIN

- 7 Now we're going to use the new information we learned about urban agriculture to practice sentence combining, a skill that is important in both the reading and the writing portions of the TASC exam.
- 8 Distribute *Sentence Combining with Urban Agriculture* handout. Review sentence combining techniques if necessary, specifically how to use coordinating conjunctions and dependent clauses.
- 9 Students can work independently or in pairs to complete the worksheet. When students are finished, review the worksheet as a class.



Tending the Crops Sends Urban Farmers to the Roof

By Chicago Tribune, adapted by Newsela staff, 06/24/2015

From <https://newsela.com/read/rooftop-farms/id/10762>

CHICAGO, Ill.—For more than 10 years, Chicago has been a leader in the green-roof movement to add gardens to the roofs of buildings. Now the city is ready to take an active place in the next environmental push—using rooftops to grow food. It is a movement that is sparking interest in cities nationwide. Rooftop farms are sprouting all around the city. The McCormick Place convention center has grown tens of thousands of pounds of produce since 2013. Likewise, a historic Pullman neighborhood factory is expected to have the world’s largest rooftop garden when it is completed this summer. Even small businesses and schools have them in Chicago.

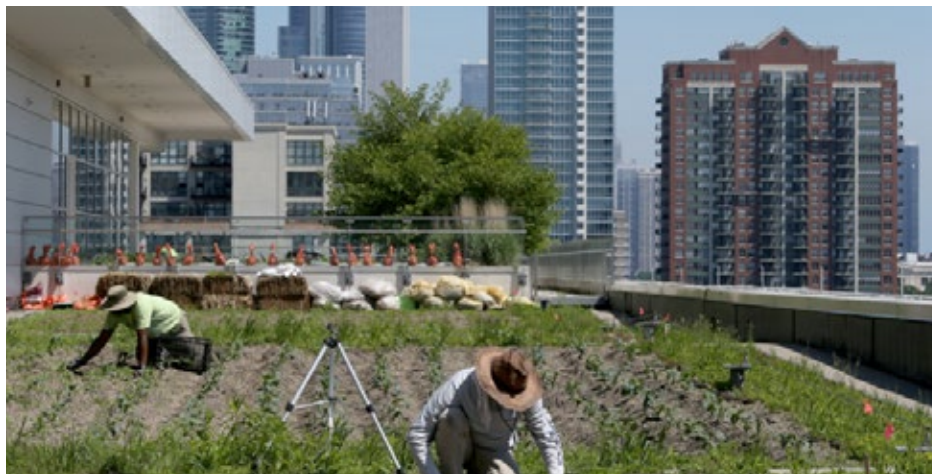
Other Cities Join The Green List

It is too early to tell what kind of effect rooftop farming could have on food production. The idea is still very new. Peter Strazzabosco works for the city of Chicago. He believes there are at least 13 rooftop farms in the city, although he said there could be more. Other cities are known for being green too. Washington, D.C.,

has three rooftop farms and Toronto, Canada, has two, according to officials in those cities. Michael Bryson, a professor at Roosevelt University, said the discussion of sustainability is important. He believes agriculture inside cities can help us to improve how we grow and distribute food. Rooftop farms make sense in Chicago. It already had many rooftop gardens and is a city known for being green, Bryson said. “Chicago has really embraced” the “practice of city farming,” he said.

Windy City Leads The Way

The former mayor of Chicago, Richard M. Daley, got the idea after seeing a rooftop garden on a trip to Germany. He returned with a mission to turn Chicago into a green-movement leader. He built the city’s first green roof atop city hall in 2000. In the years since, green roofs have gotten a lot of attention. Chicago has been recognized as one of the leaders in North America. The city has more than 5.5 million square feet on more than 500 rooftops, said Strazzabosco of Chicago’s city government.



Apprentices Eric Hussey (left) and Christopher Braun weed a kale garden and thin lettuce plants on the rooftop garden of McCormick Place in Chicago, Illinois, June 2, 2015. The garden is managed by Windy City Harvest, a sustainable agriculture program out of the Chicago Botanic Garden’s Urban Agricultural Department.

Even that is still a small number. Those 500 green roofs represent a little less than one-tenth of 1 percent of Chicago's 500,000 buildings. Experts in Germany say that about 15 percent to 20 percent of the flat roofs in that country are green.

There are no figures for the overall number of green roofs in North America. But it is known that Washington, D.C., has been adding them quicker than others over the past four years. Washington officials said the city has 2.3 million square feet of green roofs. Philadelphia reported more than 1 million square feet.

It's All In The Timing

Chicago wanted to promote city farming, so in 2011 it passed a law allowing rooftop farms to be built in the city. Now Gotham Greens, a company from New York, is set to open a rooftop farm in August in the Pullman neighborhood of Chicago. The company says it will be the world's largest. It will be built on top of a factory used by Method, the eco-friendly soap company. Method began a partnership with Gotham Greens last spring. When the farm opens, it will span 75,000 square feet, or nearly 2 acres. It will yield produce equal to a 40-acre farm, Gotham Greens CEO Viraj Puri said.

Chicago's green approach, as well as good timing, helped bring the company to the city,

according to Puri. Gotham Greens was looking for a place in Chicago, and Method reached out and suggested a partnership. Like New York, Puri said, Chicago provides an opportunity to build upward.

New York officials said they did not know how many green roofs there are in their city. However, Gotham Greens already has three commercial rooftop farms in New York. They have two 15,000- and 20,000-square-foot operations in Brooklyn. They also have a 60,000-square-foot rooftop in Queens that will begin crop production this year.

Longer Growing Season

An improvement in technology has also contributed to the growth of rooftop farms. At Method, a greenhouse will have sensors. They will be able to track temperature, light, carbon dioxide and oxygen. This removes the problems of plants growing in cities like Chicago with cold winters. A computer system will be used to adjust those levels as necessary.

Puri said Gotham Greens chose leafy greens to farm locally because they can spoil quickly. They do not store as well as other vegetables either. Both of those reasons make them a good choice to be grown locally, instead of shipped in from far away. The greens will be sold to local stores, restaurants and farmers markets. •



Sentence Combining with Urban Agriculture

Work independently or with a partner to combine the following sentences from the article, “Tending the Crops Sends Urban Farmers to the Roof.” According to each section, you will either use coordinating conjunctions/FANBOYS (“for,” “and,” “nor,” “but,” “or,” “yet,” and “so”) or dependent clauses (“because” or “although”) to combine the sentences.

Sentence Combining with FANBOYS

Combine these sentences from the article using “and,” “but” or “so.” The first set is done for you as an example.

SET 1

It is too early to tell what kind of effect rooftop farming could have on food production.
The idea is still very new.

*The idea is still very new, so it is too early to tell what kind of effect rooftop
could have on food production.*

SET 2

At Method, a greenhouse will have sensors.
They will be able to track temperature, light, carbon dioxide and oxygen.

SET 3

The city has more than 5.5 million square feet on more than 500 rooftops, said Strazzabosco of Chicago’s city government.
Even that is still a small number.

SET 4

Puri said Gotham Greens chose leafy greens to farm locally because they can spoil quickly.
They do not store as well as other vegetables either.

Sentence Combining Using Dependent Clauses

Now combine the same sentences using “although” or “because.” Set 1 is done for you as an example.

SET 1

It is too early to tell what kind of effect rooftop farming could have on food production.

The idea is still very new.

It is too early to tell what kind of effect rooftop farming could have on food production

because the idea is still very new.

SET 2

At Method, a greenhouse will have sensors.

They will be able to track temperature, light, carbon dioxide and oxygen.

SET 3

The city has more than 5.5 million square feet on more than 500 rooftops, said Strazzabosco of Chicago's city government.

Even that is still a small number.

SET 4

Puri said Gotham Greens chose leafy greens to farm locally because they can spoil quickly.

They do not store as well as other vegetables either.

Informational Essay: Can What You Eat Affect Your Mental Health?



2 HOURS

Students read an article about the effects of nutrition on mental health and write an informational essay, a kind of essay that appears on the TASC exam.



Informational essay

PREP

- Read *Can What You Eat Affect Your Mental Health?* article
- Read *Informational Essay: Can What You Eat Affect Your Mental Health?* essay prompt and be prepared to lead students through turning the essay prompt into guiding questions.
- Be prepared to explain vocabulary terms: **psychiatry**, **Western diet**, **whole-foods diet**, **“blip on the radar,”** **refined**, **cognition**, **Mediterranean**, **fermented**
- Decide which essay planning strategy you want to introduce or implement (graphic organizer, outline, etc.).

MATERIALS

- *Informational Essay: Can What You Eat Affect Your Mental Health?* essay prompt
- *Can What You Eat Affect Your Mental Health?* article
- *Informational Essay Graphic Organizer* worksheet

EXPLAIN

- 1 Ask students to turn to a partner and discuss the following questions:
 - Why do some people say that breakfast is the most important meal of the day?
 - How do you feel when you haven't eaten well or enough during the day? How is your day impacted?
- 2 Ask pairs to summarize their conversations and share with the class.
- 3 Today we are going to practice writing an informational essay. This is one kind of essay that appears on the TASC exam. Distribute *Informational Essay: Can What You Eat Affect Your Mental Health?* essay prompt and ask students to read just the prompt (the first paragraph).

VOCABULARY

psychiatry
 Western diet
 whole-foods diet
 “blip on the radar”
 refined
 cognition
 Mediterranean
 fermented

- 4 Ask for a volunteer to read **Step 1** and, using the example as a guide, support students through creating 2-3 guiding questions based on the prompt that they will all use as a class to guide their reading, planning and writing. These questions must be based solely on the prompt. Some examples might be:
 - How can food affect our mental health?
 - What can people eat to help promote mental health?
 - Are there limitations to what food can do to promote mental health?
- 5 When the class has decided on 2-3 guiding questions and written them into the worksheet, ask for a volunteer to read **Step 2** and then give students time to read and annotate the article.
- 6 When students are finished, lead a discussion in which you draw out their understanding of the article. Sample questions could include:
 - Can what we eat affect our mental health? If so, how?
 - What is nutritional psychiatry? How do you know?
 - Which ideas seem the most important? How do you know?
 - What are some examples of foods that might help someone's mental health?
 - What are some examples of foods that can hurt someone's mental health?
 - Who are the experts in the article? Why are they considered experts?
 - Is this information 100% accurate? How do you know?
 - What else does this article make you think of?
 - Can you relate this article or specific details to your own life or something else you've learned?
- 7 Next ask a student to read **Step 3**. Students can use the essay planning strategy you've chosen (graphic organizer, outline, etc.) to plan their essays. Circulate to assist students with their essay planning.
- 8 Next ask students to read **Step 4** and discuss briefly why each piece of advice is important. Give students time to write their essays.

For guidance on teaching **annotation**, see "How to Teach Annotation" in the User's Guide, found at www.tinyurl.com/cunycareerkits.



Can What You Eat Affect Your Mental Health?

By Kelli Miller, Reviewed by Brunilda Nazario, MD

From <https://www.webmd.com/mental-health/news/20150820/food-mental-health#1>

What's for dinner? The question is popping up in an unexpected place—the psychiatrist's office. More research is finding that a nutritious diet isn't just good for the body; it's great for the brain, too. The knowledge is giving rise to a concept called “nutritional (or food) psychiatry.”

“Traditionally, we haven't been trained to ask about food and nutrition,” says psychiatrist Drew Ramsey, MD, an assistant clinical professor at Columbia University. “But diet is potentially the most powerful intervention we have. By helping people shape their diets, we can improve their mental health and decrease their risk of psychiatric disorders.”

Nearly 1 in 4 Americans have some type of mental illness each year. The CDC says that by 2020, depression will rank as the second leading cause of disability, after heart disease. It's not just a problem for adults. Half of all long-term mental disorders start by age 14. Today, childhood mental illness affects more than 17 million kids in the U.S. Recent studies have shown “the risk of depression increases about 80% when you compare teens with the lowest-quality diet, or what we call the Western diet, to those who eat a higher-quality, whole-foods diet. The risk of attention-deficit disorder (ADD) doubles,” Ramsey says.

A Growing Idea

Just 5 years ago, the idea of nutritional psychiatry barely registered a blip on the health care radar. There had been a few studies examining how certain supplements (like



Photo: <https://theheartysoul.com/nutrition-treats-mental-health/>

omega-3 fatty acids) might balance mood. Solid, consistent data appeared to be lacking, though. But experts say many well-conducted studies have since been published worldwide regarding a link between diet quality and common mental disorders -- depression and anxiety -- in both kids and adults.

“A very large body of evidence now exists that suggests diet is as important to mental health as it is to physical health,” says Felice Jacka, president of the International Society for Nutritional Psychiatry Research. “A healthy diet is protective and an unhealthy diet is a risk factor for depression and anxiety.” There is also interest in the possible role food allergies may play in schizophrenia and bipolar disorder, she says. But nearly all research involving eating habits and mental health has focused more on depression and anxiety. And there's no direct evidence yet that diet can improve depression or any other mental disorder, although a trial to determine this is now underway.

Experts caution that while diet can be part of a treatment plan, it shouldn't be considered



a substitute for medication and other treatments. Here's what they do know about how diet may play a role in mental health. What you eat affects how your immune system works, how your genes work, and how your body responds to stress.

3 Ways Diet Impacts Your Mental Health

Here are some more details on how good nutrition impacts brain health:

1. It's crucial for brain development.

"We are, quite literally, what we eat," says Roxanne Sukol, MD, preventive medicine specialist at Cleveland Clinic's Wellness Institute. "When we eat real food that nourishes us, it becomes the protein-building blocks, enzymes, brain tissue, and neurotransmitters that transfer information and signals between various parts of the brain and body."

2. It puts the brain into grow mode.

Certain nutrients and dietary patterns are linked to changes in a brain protein that helps increase connections between brain cells. A diet rich in nutrients like omega-3s and zinc boosts levels of this substance. On the other hand, "a diet high in saturated fats and refined sugars has a very potent negative impact on brain proteins," Jacka says.

3. It fills the gut with healthy bacteria.

And that's good for the brain. Trillions of good bacteria live in the gut. They fend off bad germs and keep your immune system in check, which means they help tame inflammation in the body. Some gut germs even help make brain-powering B vitamins. Foods with beneficial bacteria (probiotics) help maintain a healthy gut environment, or "biome." "A healthier biome is going to decrease inflammation, which affects mood and

cognition," Ramsey says. A high-fat or high-sugar diet is bad for gut health and, therefore, your brain. Some research hints that a high-sugar diet worsens schizophrenia symptoms, too.

This Is Your Brain On...Kefir?

Certain foods may play a role in the cause of mental disorders, or they may make symptoms worse. A nutritious brain diet follows the same logic as a heart healthy regimen. You want to limit sugary and high-fat processed foods, and opt for plant foods like fresh fruits, veggies, and whole grains. Swap butter for healthy fats like olive oil, too. Basically, you want to eat a Mediterranean diet. It's "an ideal diet for physical and mental health," Jacka says. Recent results from a large trial in Europe show that such an eating plan may also help prevent, and not just treat, depression.

The key is to choose foods that pack as many nutrients in as few calories as possible. Nutrients that might be particularly helpful for treating or preventing mental illness are:

- **B vitamins.** People with low B12 levels have more brain inflammation and higher rates of depression and dementia. Falling short on folate has long been linked to low moods.
- **Iron.** Too little iron in the blood (iron-deficiency anemia) has been linked to depression.
- **Omega-3s.** These healthy fatty acids improve thinking and memory and, possibly, mood.
- **Zinc.** This nutrient helps control the body's response to stress. Low levels can cause depression. A great source is oysters, which pack 500% of your daily



need of zinc but have just 10 calories apiece, Ramsey says. Mussels, which are rich in brain-healthy selenium, are also a good choice.

Also, fermented foods such as kefir, sauerkraut, kimchi, and yogurt with live active cultures, which provide good gut bacteria, may help reduce anxiety, stress, and depression. Fatty fish like salmon and mackerel provide omega-3 fatty acids, vitamin B12, zinc, selenium and other brain boosters. And dark chocolate has antioxidants, which increase blood flow to the brain, aiding mood and memory. Unfortunately, the typical American diet is “extremely low” in these nutrients, Ramsey says. He’s working on a new tool called the Brain Food Scale, to be published later this year. It will provide a quick look at the nutrient-to-calorie relationship.

Does Diet Replace Medicine?

You should always talk to your doctor before stopping or taking less of any medication you’re on.

“No matter where you are on the spectrum of mental health, food is an essential part of your treatment plan,” Ramsey says. “If you are on medications, they are going to work better if you are eating a brain-healthy diet of nutrient-dense foods.”

Ramsey recommends that you talk to your doctor about what you should eat -- not just what you shouldn’t. He hopes that one day a simple 5-minute food assessment will become part of every psychiatric evaluation.

Nutritionists like the idea.

“More psychiatrists need to recognize the nutrition-mental health connection,” says Michelle Schoffro Cook, PhD, who is registered by the International Organization of Nutritional Consultants. “We can have so much power over our mental health using food and nutrients.” •

Informational Essay: Can What You Eat Affect Your Mental Health?

Adapted from <http://www.collectedny.org/wp-content/uploads/2016/12/WRITERS-WRITE-8-Information-Essay-Prompts.pdf>

ESSAY PROMPT:

Interesting and important research has been done about the effects of the foods we eat on our mental health. A new field called nutritional psychiatry believes there are foods that can help prevent and treat certain mental health conditions, as well as improve our memory and moods. Write an informative essay in which you discuss the proposed effects of nutrition on mental health and how people should and shouldn't go about using this information.

STEP 1:

In the box below, you will turn the essay topic—what you are going to write about—into one or more questions. For example, if the essay assignment read, “Write an informational essay explaining what the TASC exam is and how to prepare for it,” you then turn the assignment into the following 2 questions:

- What is the TASC exam?
- How can students prepare for it?

These questions will be your guiding questions for your reading. Your essay will be focused on answering those two questions. Now turn the essay prompt from the top of the page into a few questions:

GUIDING QUESTIONS: TURN TOPIC INTO QUESTIONS

STEP 2:

Read and annotate the text: *Can What You Eat Affect Your Mental Health?* As you read, try to answer the guiding questions. Mark anything you think is important, interesting or confusing. Write any questions or comments you have in the margins.

**STEP 3:**

Plan your essay. Think about ideas, facts, definitions, details, and other information and examples you want to use. Think about how you will introduce your topic and what the main topic will be for each paragraph.

Optional: Fill out a graphic organizer or write a brief outline.

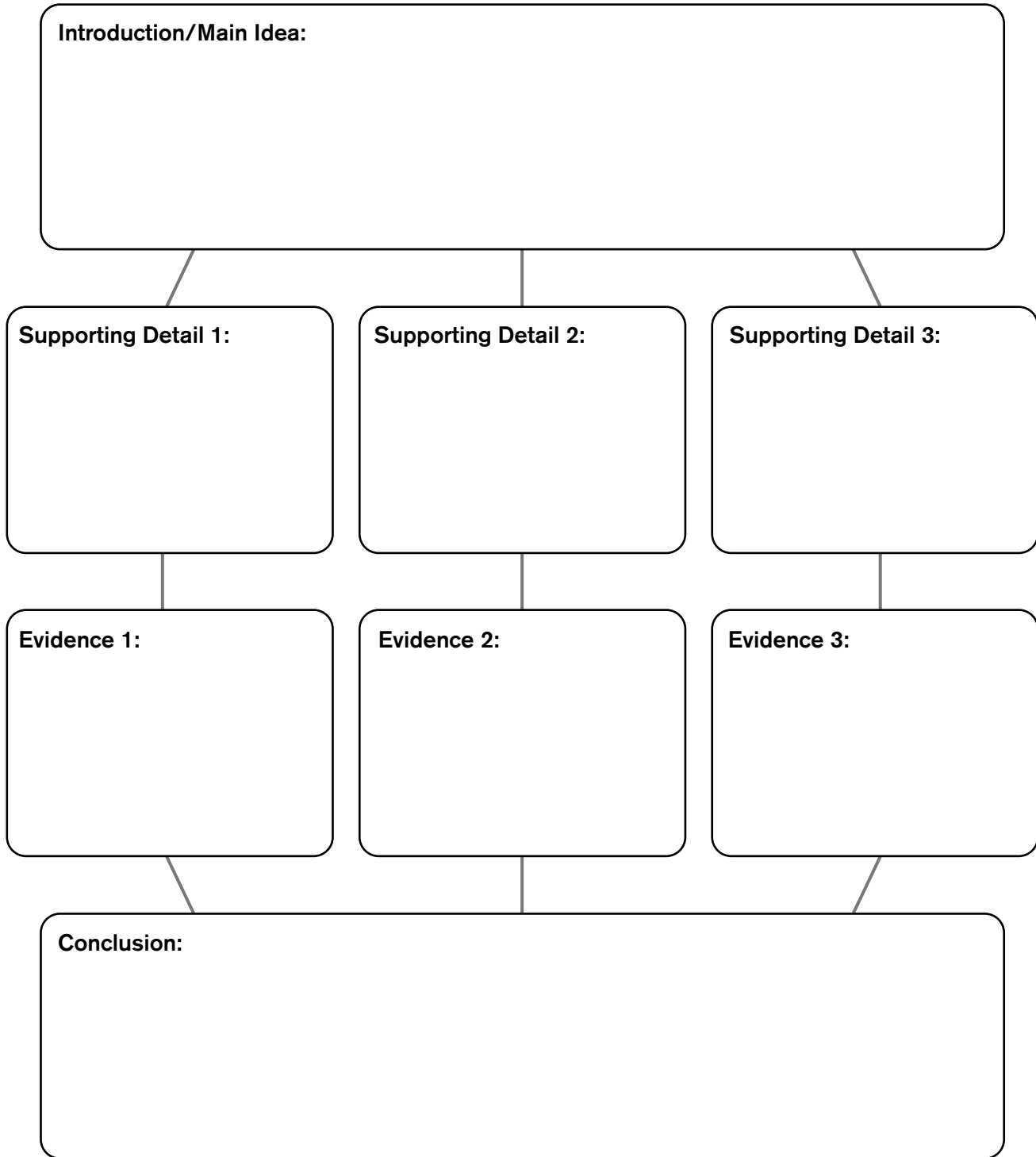
STEP 4:

Now write your informative essay. Be sure to:

- Introduce the topic to be examined.
- Develop the topic with specific facts, details, definition, examples and other relevant information from the article.
- Organize the information and evidence effectively.
- Use words, phrases, and/or clauses to connect and show the relationship among your ideas.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from and supports the information presented.

Informational Essay Graphic Organizer

Use the boxes below to outline your main idea, supporting details, and evidence for your essay.
Use this outline to guide your essay writing.



NYC Foodscapes: Community Food Environment Profiles*



90 MINUTES

Students read profiles of different community food environments created by The New York City Food Policy Center at Hunter College (CUNY), which contain infographics and data for factors that contribute to a neighborhood's food environment. Students read the profiles for two different neighborhoods in NYC and then work in groups to compare and contrast their food environments. Finally, they discuss how this information might be used to make concrete improvements in the lives of their residents.

Note: This activity uses New York City food environment profiles created by The New York City Food Policy Center at Hunter College (CUNY). Many counties and regions provide similar information about local conditions. If your county or region does not have similar data available, you can use the NYC data.



- Make inferences
- Sentence combining



- Summarizing
- Reading an infographic



- Calculations with percents

PREP

- Visit <http://www.nycfoodpolicy.org/nyc-foodscapes-community>. Read and familiarize yourself with the Bedford Stuyvesant/Crown Heights Foodscape profile. The profile is also included in the lesson materials.
- Be prepared to explain vocabulary terms: **food environment**, **public policy**, **food policy**.
- Write the website on the board:
<http://www.nycfoodpolicy.org/nyc-foodscapes-community>
- Students should already be familiar with calculating with percents.

MATERIALS

- This activity requires a computer lab or smartphones
- *Compare and Contrast: Community Food Environment Profiles* handout

VOCABULARY

food environment
public policy
food policy



*RAENs will provide regional adaptations.

EXPLAIN

* Adapted from
<http://www.nycfoodpolicy.org/nyc-foodscapes-community/>

1 Access to affordable and nutritious food is necessary for good health. Without affordable, nutritious food, individuals—and communities—are at a higher risk of serious chronic diseases, including obesity, diabetes and heart disease. To improve the health of New Yorkers, some experts in food policy believe we must recognize that each neighborhood has a distinct food environment.* Food policy are laws and public policies that govern how food is produced, processed, distributed, and purchased. Some food policy experts believe it is important to look at the differences between each neighborhood's food environment to best determine what each neighborhood needs.

2 A neighborhood's food environment is made up of physical, biological, and social factors that affect the way the people in the neighborhood eat. One example of a physical factor that can determine a neighborhood's food environment is whether or not people in the neighborhood have access to fresh fruit and vegetables. An example of a biological factor is whether or not the soil in the neighborhood is healthy enough to grow food in. This is a biological example because it has to do with nature. An example of a social factor that can affect the food environment of a neighborhood is the average household income of its residents.

Why would the average household income in the neighborhood affect how its residents eat?

› *If people don't make enough money to buy enough food or fresh food, they might experience food insecurity or have unhealthy diets.*

3 Can you think of other factors that might influence a neighborhood's food environment? Write student brainstorm on the board. Some sample answers:

› *Access to other nutritious foods and beverages*

› *Non-nutritious food advertisements everywhere (soda, chips, candy, etc.)*

› *Many fast food restaurants in the neighborhood*

› *Employment/wages*

› *Access to food assistance programs (SNAP)*

› *Community gardens*

› *Nutrition education, for example, are children taught how to eat nutritiously in the neighborhood schools?*

› *Access to health care*

› *Reliable transportation*

› *Clean water*

› *School food programs, such as free and reduced breakfast/lunch for kids*

- 4 Some food policy experts think we should recognize each community as a distinct food environment that has a unique set of issues and potential solutions. In an effort to understand these differences, the food policy experts at The New York City Food Policy Center at Hunter College have compiled data from various sources into community food environment profiles called Foodscapes. The Foodscapes profiles provide information about a community's food environment, including data on healthy and unhealthy food consumption, food access, and nutrition-related diseases. The reports also show some of the many resources available to support residents in eating healthier.
- 5 We're going to start by reading one neighborhood profile together. Then you'll split up into groups and compare and contrast the profiles for two different neighborhoods. Finally, each group will present their findings to the rest of the class.
- 6 Ask students to navigate to <http://www.nycfoodpolicy.org/nyc-foodscapes-community> and ask volunteers to read the three introductory paragraphs aloud: **About Foodscapes**, **Purpose**, and **The Data** (as seen on page 2 of the sample Foodscape included below).
- 7 When students are finished, ask them to share two things they notice and one thing they wonder with their neighbor about what they just heard and read.
- 8 Ask students to scroll down and find the list of neighborhood profiles. Ask students if they recognize any of the neighborhoods on the list. Do they see their own neighborhood? Assure students that if they do not get assigned their own neighborhood during the classroom activity, they can always return to the site later to read that data.
- 9 Scroll down to the Brooklyn section and click on the link for Bedford Stuyvesant/Crown Heights. Ask students to do the same. Ask students to take a few minutes to read through the profile on their own. Then ask: **What did you notice? What stood out to you the most? What questions do you have?**
 - › *Answers will vary. There are no wrong answers. The goal is to get students thinking about the information. Write the questions students have on the board to be used for the following discussion.*

DISCUSSION

Let's see if we can answer some of those questions. Ask students to scroll to page three of the profile, or the first infographic, titled, "About Bedford Stuyvesant/Crown Heights." Explain, these are two neighborhoods in Brooklyn. They are relatively small and located next to each other so the experts grouped them together. **Ask:** What do you see here?

- › *A map of Brooklyn showing where the neighborhood is located. The number of people that live in this neighborhood. A percentage breakdown of the population by age and race.*

Why do you think the food policy experts thought this information was important when thinking about a neighborhood's food environment and what residents' needs might be?

- › *To see if people of different ages and different racial backgrounds are affected differently by the factors that determine a neighborhood's food environment, like wages or access to healthy food.*

What do you notice about the ages of the residents in Bed Stuy and Crown Heights?

- › *The largest percentage of people are ages 25-44. The smallest group is aged 65 and older. There is the same percentage of 0-17 and 45-64 year-olds.*

How could you figure out the number of 25-44 year-olds that live in this neighborhood?

- › *Calculate 33% of the total population (331,606).*

What do you notice about the racial make-up of this neighborhood?

- › *It is a primarily black neighborhood (67%). There is the same percentage of white and Hispanic people in this neighborhood (14%). There are very few Asian/Pacific Islander (API) people or people of "other" racial backgrounds in this neighborhood.*

How could you find out the total number of white and Hispanic residents in this neighborhood?

- › *Calculate 14% of the total population and then multiply it by two.*

Ask students to scroll to the next page. **Ask:** What do you see here?

- › *Bar graphs depicting percentage of education levels and poverty and unemployment levels for Bed Stuy/Crown Heights and also for NYC as a whole.*

What do the blue bars on the graph represent?

- › *Bed Stuy/Crown Heights.*

How do you know?

- › *The key above the graph explains what each color means.*

What do the gray bars on the graph represent?

- › *All of NYC.*

Why might food policy experts want to compare the two?

- › *So they can see which neighborhoods are above or below average for the city.*

What do you notice when looking at the data on this graph?

What do you wonder about the information on this graph?

Why is this specific data important in thinking about a neighborhood's food environment?

- › *Because employment and income level can determine the quality and the amount of food people can afford. Education level sometimes determines how much money people make. It might also have an influence on residents' level of nutrition knowledge.*

If you wanted to figure out the number of people in Bed Stuy and Crown Heights that live below the federal poverty line, how could you do that?

- › *Calculate 27% of the total population number from the previous page.*

Read the rest of the profile (pp. 5-8) aloud with students in this manner, using a similar line of questioning for each page. Use the following guidelines to further assist you:

- Ask students what they see in the infographic and what questions they have about each page (What do you notice? What do you wonder?).
 - Ask students to explain how each data set is related to a neighborhood's food environment and how it might help food policy experts to better understand what residents need.
 - Ask students how the data sets are related to each other. For example, how might obesity rates be related to the rate of families living below the poverty line? Or how might the number of farmer's markets in the neighborhood relate to residents' access to fresh fruits and vegetables?
 - Ask students to explain their answers with evidence from the infographics (How do you know? Why do you think that?).
- 10** Explain that students will now read two different food environment profiles in small groups and work together to compare and contrast them. Divide students into groups of 3–5, depending on class size. Assign each group one of the following neighborhood pairings:

- **Group 1:** South Bronx and Chelsea/Greenwich Village
- **Group 2:** Central Harlem and Southern Staten Island
- **Group 3:** Upper East Side/Gramercy and Coney Island/Sheepshead Bay
- **Group 4:** Long Island City/Astoria and The Rockaways
- **Group 5:** Washington Heights/Inwood and Northeast Bronx

* Teacher can make additional pairings as needed for larger class sizes. Profile pairs should reflect a noticeable level of difference in demographics and/or data outcomes.

- 11** Distribute *Compare and Contrast: Community Food Environment Profiles* handout. Ask groups to navigate to and read their two assigned community profiles and work together to complete the worksheet.
- 12** When groups are finished, lead a discussion in which you debrief their process. Ask students to connect the information to their own experiences and imagine how food policy experts might use this information to improve neighborhood food environments. Make sure to ask students to explain their thinking and use evidence from the texts to support their answers. Some sample questions might include:
 - What was it like to read two profiles side by side and compare them?
 - Did you notice any big similarities or differences between the neighborhoods? What might be some reasons for these? Why do you think that?
 - All the paired neighborhoods were in different boroughs from each other. How do you think the data might be different if you looked at two neighborhoods that were close to each other? Why do you think that?
 - How do you think the information you read compares to your own neighborhood's food environment? Why do you think that?
 - What does this information make you think or feel about your own neighborhood's food environment?
 - Imagine you are a food policy expert. What other information might you want to collect data on to determine how a neighborhood's food environment could be improved?
 - Imagine you are a food policy expert. What concrete changes would you recommend to improve the food environments you read about today? Explain how these changes would improve the lives of neighborhood residents.



A Foodscape of Bedford Stuyvesant/ Crown Heights

UHF Neighborhood #203 (zip codes 11212, 11213, 11216, 11233, 11238)

Includes parts of City Council Districts 35, 36, 37, 39, 41, and 42



NEW YORK CITY
FOOD POLICY CENTER
AT HUNTER COLLEGE

HUNTER
The City University of New York



About Foodscapes

Access to affordable and nutritious food is one of the cornerstones of good health. Without this, individuals—and communities—are at a higher risk of serious chronic diseases, including obesity, diabetes and heart disease. To improve the health of New Yorkers, we must recognize that each neighborhood has a distinct food environment.

Purpose

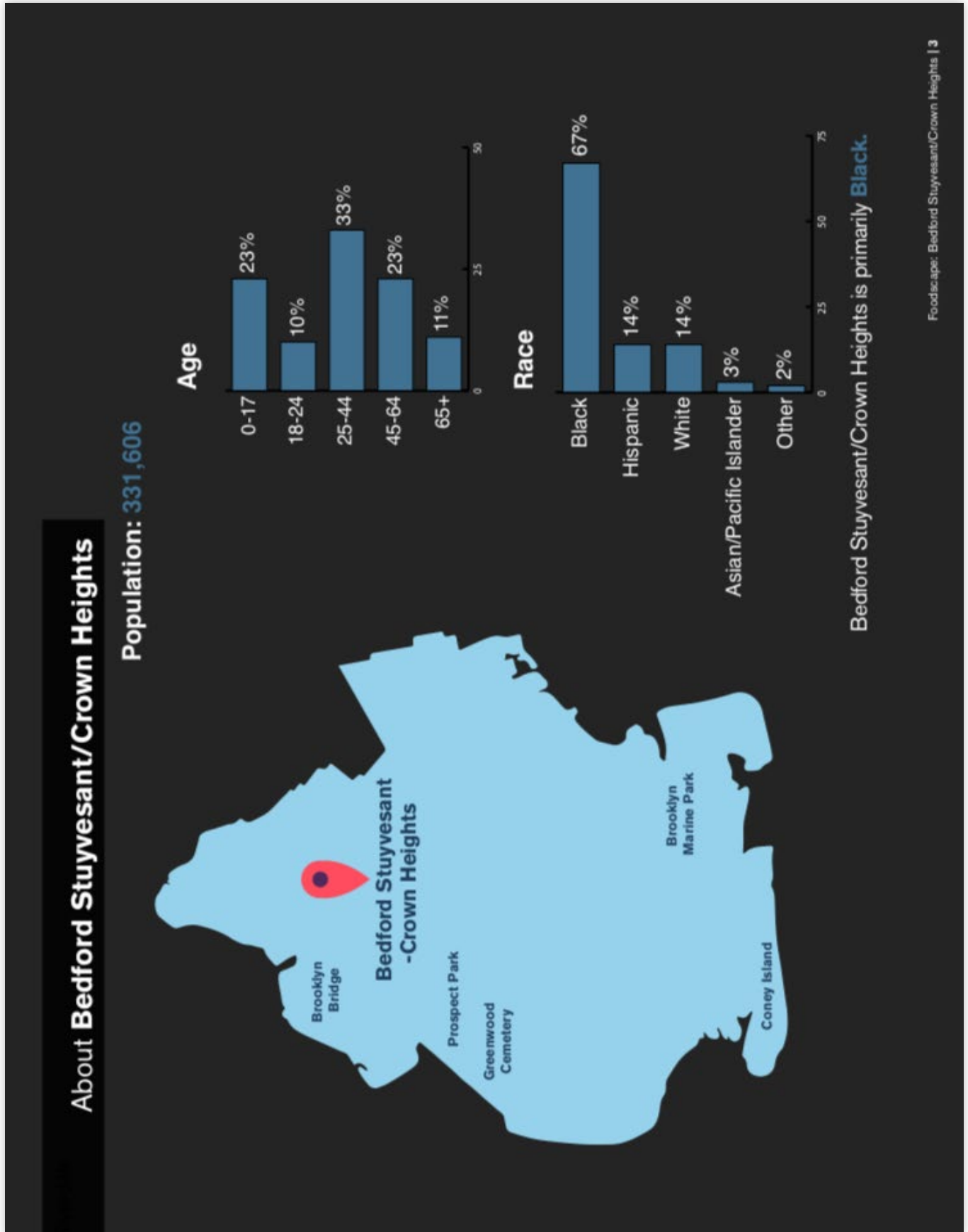
This Foodscape provides a community-level snapshot of that environment, including data on healthy and unhealthy food consumption, food access, and nutrition-related diseases. Additionally, the report details a sampling of the many resources available to residents within their neighborhoods to support them in eating healthier.

The Data

The data are presented by United Hospital Fund (UHF) neighborhoods, which are defined by the United Hospital Fund and consist of multiple adjacent zip codes. UHF neighborhoods are commonly used in research, including the New York City Department of Health and Mental Hygiene's [Community Health Survey](#).

The reports also specify the City Council Districts that are part of each UHF, and districts often span several UHF neighborhoods. Council members and residents can then view the distinct neighborhoods within their districts, to compare and contrast both the needs and assets within each area. Recognizing that UHF neighborhoods are an imperfect way to capture council districts holistically, the hope is that future updates to the reports will use data more specific to each district.

Foodscape: Bedford Stuyvesant/Crown Heights | 2

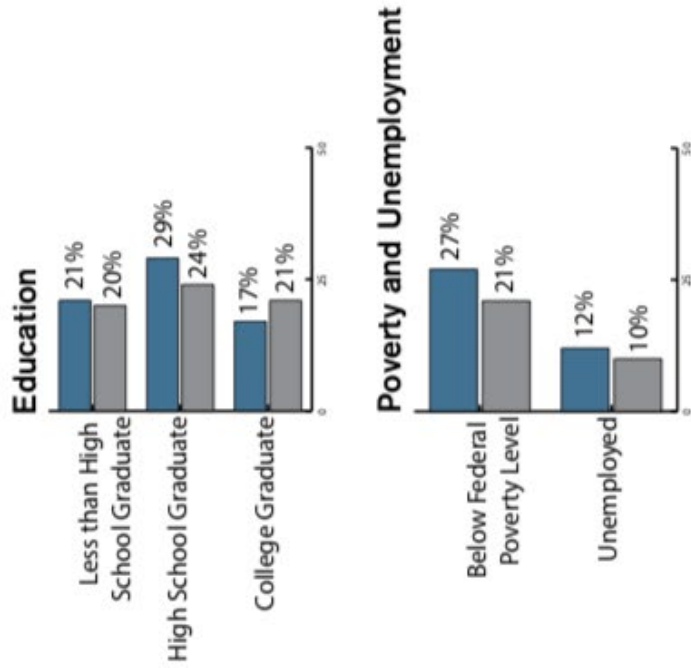




Educational attainment levels in Bedford Stuyvesant/Crown Heights are similar to New York City as a whole. In this neighborhood, a slightly lower percentage of residents are college graduates (17% vs. 21% in NYC).

More than one in four neighborhood residents lives in poverty (vs. 21% citywide) and 12% are unemployed, slightly higher than the citywide rate of 10%.

■ Bedford Stuyvesant/Crown Heights
■ Citywide



Foodscape: Bedford Stuyvesant/Crown Heights | 4





**Access to Healthy Food and Food Security
in Bedford Stuyvesant/Crown Heights**

**Walking Distance to Fresh
Fruits and Vegetables**



Walking distance to fruits and vegetables is an indicator of access to healthy foods. Although access alone may not be sufficient to improve health, studies have found an association between better access and improved diet quality and other health indicators.³

In Bedford Stuyvesant/Crown Heights, the majority (62%) of residents live within a five-minute walk to fresh produce, compared to 49% citywide.

Food security means having consistent access to safe, nutritious, and affordable food. The use of Supplemental Nutrition Assistance Program (SNAP) benefits, or food stamps, is an indicator of food insecurity; the majority of households that receive SNAP are food insecure.⁴

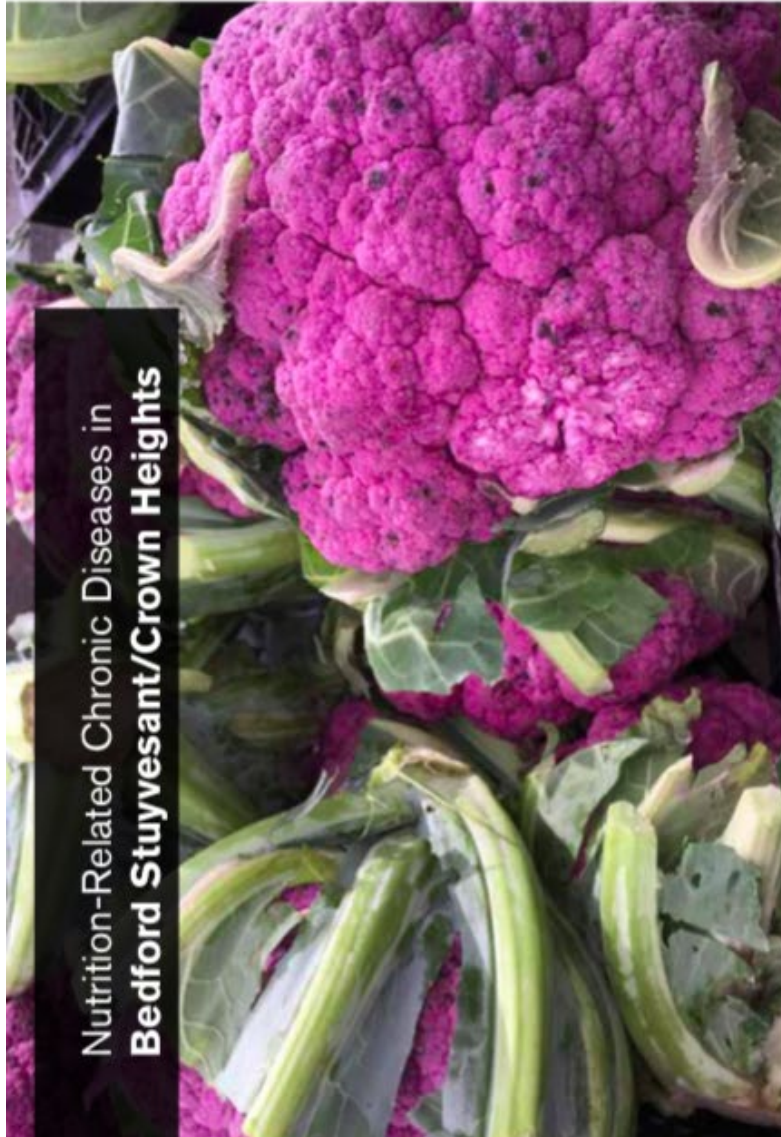


**Households Receiving
SNAP Benefits**

The U.S. Census Bureau estimates that 12.8% of all households in the United States received SNAP benefits at some point in 2015.

In Bedford Stuyvesant/Crown Heights, nearly one third of households receive SNAP benefits, higher than New York City overall (21%).

Foodscape: Bedford Stuyvesant/Crown Heights | 6



Nutrition-Related Chronic Diseases in Bedford Stuyvesant/Crown Heights

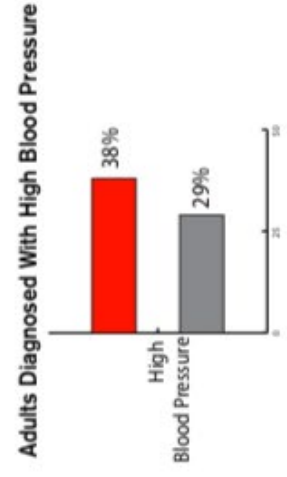
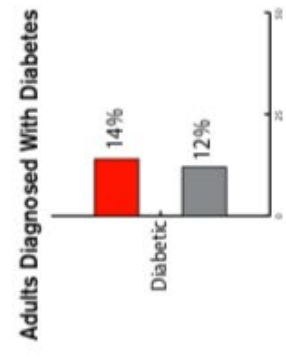
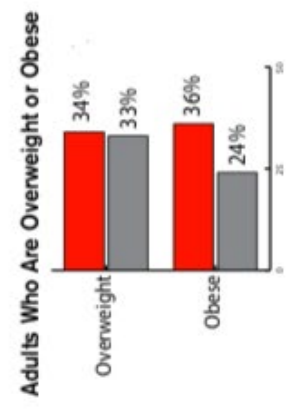
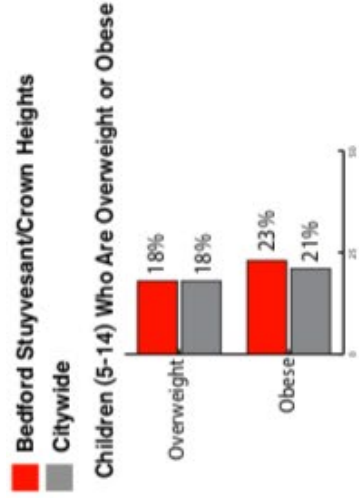
In Bedford Stuyvesant/Crown Heights, the prevalence of childhood obesity is slightly higher than New York City overall (23% vs. 21%). Children who are obese are more likely to remain obese as adults.⁵ When children remain obese into adulthood their risk for heart disease and other comorbidities becomes more severe.⁶

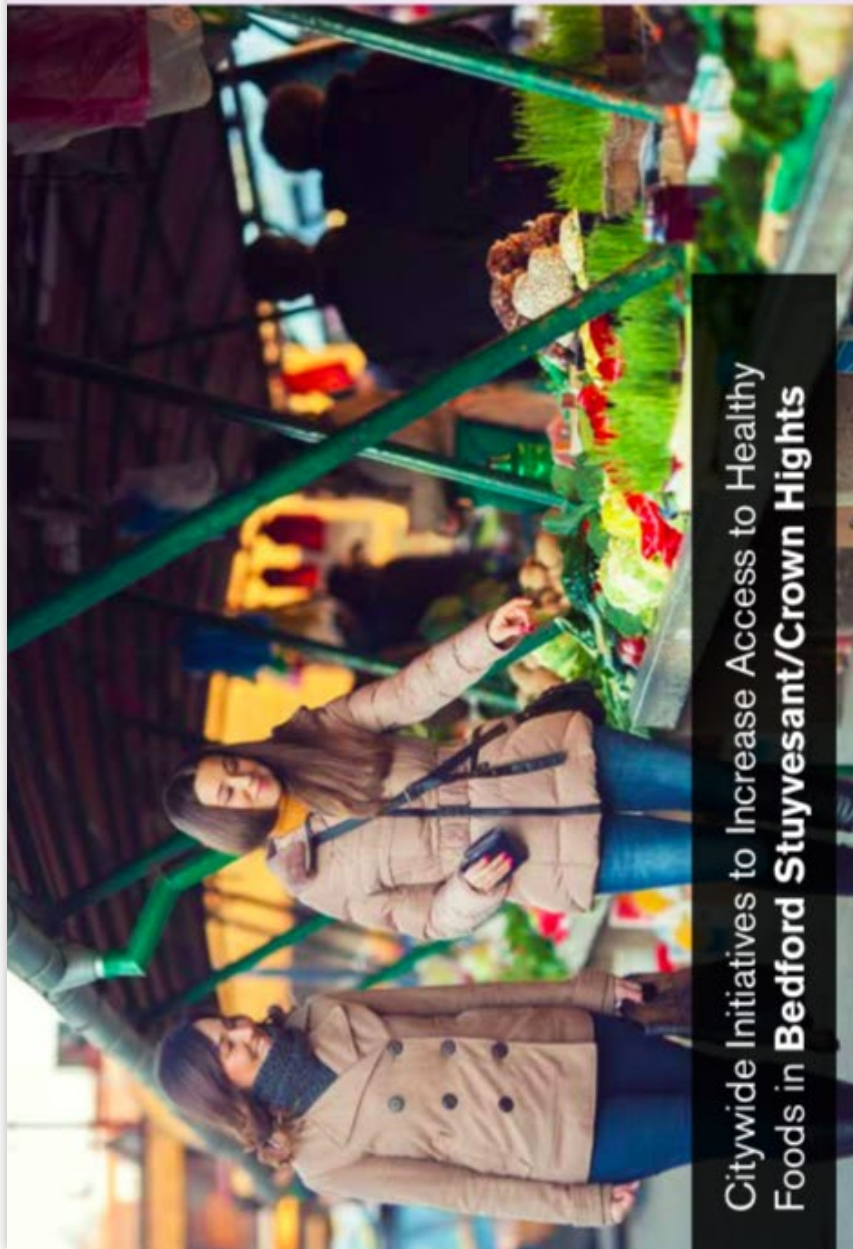
Adult obesity in this neighborhood is more prevalent than in New York City, at 36% (vs. 24% citywide). Obesity can lead to serious health

conditions, including diabetes and heart disease.

The prevalence of diabetes is slightly higher in Bedford Stuyvesant/Crown Heights than in New York City as a whole (14% vs. 12%). Uncontrolled diabetes can cause blindness, renal disease, and amputations.

Additionally, a higher percentage of neighborhood residents have high blood pressure (38% vs. 29% in NYC), a leading risk factor for heart disease.





Citywide Initiatives to Increase Access to Healthy Foods in Bedford Stuyvesant/Crown Hights

GreenThumb Gardens

There are over 600 GreenThumb community gardens across the city, and any resident can join a garden. In Bedford Stuyvesant/Crown Heights, there are **57 GreenThumb Garden** (which total more than 427,000 square feet), 53 of which grow food. Find the most up-to-date list of gardens using GreenThumb's searchable **Garden Map**.

Grow to Learn Gardens

Grow to Learn NYC is a school gardens initiative that includes more than 600 registered network schools throughout the city. In Bedford Stuyvesant/Crown Heights, there are **37 Grow to Learn--registered network schools**. Find the most up-to-date list of school gardens using **Grow to Learn's searchable Garden Maps**.

*SNAP is the Supplemental Nutrition Assistance Program (formerly food stamps); EBT, electronic benefit transfer.

Farmers' Markets

All locations, unless otherwise noted, accept SNAP/EBT.* For an updated list of farmers' markets near you (including days/hours of operation) visit nyc.gov/health and search "farmers markets" or text "SoGood" to 877-877.

Brownsville Pitkin Avenue Youthmarket -- Pitkin Ave & Thomas Boyland St

Brownsville Rockaway Youthmarket -- Rockaway & Livonia Aves

Isabahlia Farm Stand -- Rockaway & Sutter Aves

Isabahlia Farm Stand Winter Market (Nov-Dec only) -- New Lots Ave & Sackman St, inside greenhouse

Isabahlia Farmers' Market -- Livonia Ave bet Powell & Junius Sts

Project EATS Marcus Garvey Village Farm Market -- 300 Chester St at Dumont Ave

Hattie Carthan Community Farmers' Market -- Marcy Ave & Clifton Pl

Marcy Plaza Community Farmers' Market -- Fulton St & Marcy Ave

Bushwick Farmers' Market on Broadway -- Halsey St & Broadway

Malcolm X Blvd Farmers' Market -- Malcolm X Blvd bet Marion & Chauncey Sts

Saratoga Youth Market -- Saratoga Ave & Fulton St

Project EATS Brooklyn Museum Farm Market -- 200 Eastern Parkway

SNAP Enrollment Sites

There are no SNAP enrollment sites in Bedford Stuyvesant/Crown Heights. The closest site is:

North Brooklyn -- 500 Dekalb Ave, 4th Fl, Brooklyn, NY 11205

Foodscapes: Bedford Stuyvesant/Crown Heights | 8



About the New York City Food Policy Center at Hunter College

The New York City Food Policy Center at Hunter College develops intersectoral, innovative and evidence-based solutions to preventing diet-related diseases and promoting food security in New York City and beyond. The Center works with policy makers, community organizations, advocates, and the public to create healthier, more sustainable food environments and to use food to promote community and economic development. Through interdisciplinary research, policy analysis, evaluation, and education, we leverage the expertise and passion of the students, faculty and staff of Hunter College. The center aims to make New York a model for smart, fair food policy.

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Compare and Contrast: Community Food Environment Profiles

Answer the questions below based on your group's assigned Foodscape profiles. Write as much as you can in response to each question and give specific examples and evidence from the profiles to support your answers.

OUR NEIGHBORHOODS:

Neighborhood #1: _____ Neighborhood #2: _____

1 Write a summary of the population statistics of your neighborhoods according to page 3 of the profiles.

2 In your own words, describe the education levels of the people in your neighborhoods. Be sure to include how they compare to New York City overall.

3 _____ percent of people in _____ live below the federal poverty line.
(neighborhood 1)

_____ percent of people in _____ live below the federal poverty line.
(neighborhood 2)

Calculate the difference between the number of people who live below the federal poverty line in your neighborhoods. Your answer should be a number, not a percent. Show your work below.

This is related to food insecurity because _____



- 4 In neighborhood #1, _____ percent of people are unemployed.
This is _____ % **more** or **less** (*circle one*) than the unemployment rate for all of New York City.
In neighborhood #2, _____ percent of people are unemployed.
This is _____ % **more** or **less** (*circle one*) than the unemployment rate for all of New York City.

- 5 Most people in neighborhood #1 eat _____ servings of fruits and vegetables per day.
This is _____ % **more** or **less** (*circle one*) servings of fruits and vegetable per day than most people eat in neighborhood #2.

The factors I think influencing these numbers are _____

- 6 Are you surprised by the number of people who drink at least one or more sugary drinks per day in your neighborhoods? Why or why not?

- 7 Walking distance to fresh fruits and vegetables is an important part of a community's food environment because _____

- 8 _____ % of people in neighborhood #1 receive SNAP benefits as compared to _____ % in neighborhood #2 and _____ % citywide.

- 9 In your own words, write a 3-5 sentence summary about Nutrition-Related Chronic Diseases in these two neighborhoods. Explain how this is related to food insecurity.

I don't want my thoughts to die with me,
I want to have done something.
I'm not interested in power, or piles of
money. I want to leave something behind.
I want to make a positive contribution—
know that my life has meaning.”

— *Temple Grandin*

TEMPLE GRANDIN is a renowned American author, animal behavior expert and an advocate for autistic people. With support from her mother and guiding mentors at school, she completed her education successfully and made a flourishing career as an animal and parenting expert for autistic children. Her inventions of a “hug machine” to soothe people living with autism and “curved corrals” to reduce panic and injury in animals during slaughter have made her well known around the world. She has written numerous books on autism and animal welfare and provides guidance to slaughter factories and livestock farms to improve the quality of life of the cattle. Some of her best-selling books include *Animals in Translation*, *Animals Make Us Human*, *The Autistic Brain*, *Emergence: Labeled Autistic*, and *Thinking in Pictures*. Her life has been transformed into an inspiring film ‘Temple Grandin’ which won several awards. She has received humanitarian awards for her contribution to animal science and welfare and has appeared in numerous television shows and international magazines. The most accomplished and well-known adult with autism in the world, she has been a source of inspiration for people with autism around the world.



Quote: https://www.goodreads.com/author/quotes/1567.Temple_Grandin

Bio: <http://www.thefamouspeople.com/profiles/temple-grandin-2960.php>

Photo: http://media.salon.com/2013/05/temple_grandin.jpg