

Lesson #1: Fresh Foods Nutrition - Fruits and Vegetables 101

Lesson Goals and Objectives	High school-aged growers will: 1. Understand the importance of fruits and veggies for a healthy eating style. 2. Learn about MyPlate guidelines for balanced, healthful nutrition. 3. Understand the health benefits to food growing in areas with limited access to fruits and vegetables. 4. Learn about the nutritional value of fresh produce and ideas for simple snacks and recipes that use fresh produce. 5. Have the opportunity to sample fresh produce items.
Duration	Approximately two (2) hours (including time for questions and transitions).
Materials	<ul style="list-style-type: none">● Presentation/Slideshow● Whiteboard or flipchart, white paper or notepad, markers, pens● Fruit and Vegetable Name Game worksheet● MyPlate and/or food models to illustrate serving sizes.● Prepared food samples for taste tests<ul style="list-style-type: none">○ Cucumber, cherry tomato, and feta salad with pita wedges https://cookieandkate.com/cucumber-tomato-salad-recipe/● Serving dishes, serving spoons, plastic forks, napkins, hand sanitizer● Ingredients and cooking equipment for the selected recipe: Chunky Salsa● Recipes and handouts● Pre- and post-tests

LESSON PLAN

- * Talking points and dialogue suggestions are indicated in *Italics*.
- * Key concepts are **boldfaced**.

Welcome (5 mins)

- Greet participants, distribute handouts and introduce yourself and the program.
- Explain the sections of the workshop (educational part, hands-on cooking activity).
- Explain that translators will be present during the workshop to help students as needed.

Opening Activity/Ice Breaker (15 mins)

Snack Taste Test (5-7 mins)

- Distribute samples of the cucumber salad (Objectives 4, 5). Assess if there are any food allergies among the participants. Give a general description of what the food sample is. Emphasize that these foods can be grown here in New Jersey.

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- **Ask the students** to point out what they see/taste in the food. Some questions you may ask include: *What do you notice in these foods? How do they taste and smell to you? Have you tried these foods before? Do you like the flavors? How would you change the recipe?*
 - The students may comment on the colors and freshness of the food, or the difference in textures and flavors in the samples. The cucumber salad would be tart, salty, and firm. Make note of the students' responses so you can integrate them later in the lesson.
- Distribute the pre-test questionnaire and allow time for students to answer.

Lesson 1: Fruits and Vegetables 101, Pre-Test					
Please rate the following statements on a scale from 1 - 5, with 1 being strongly agree and 5 being strongly disagreeing.					
	Agree			Disagree	
1. Eating a healthy diet can affect my physical health as well as my mental health and academic performance.	1	2	3	4	5
2. I have a good understanding of what MyPlate is.	1	2	3	4	5
3. Fruits and vegetables of different colors contribute different types of nutrients to my health.	1	2	3	4	5
4. Growing my food can impact my nutrition quality, health, and the surrounding environment.	1	2	3	4	5
Lección 1: Frutas y verduras 101, pre-prueba					
Califique las siguientes afirmaciones en una escala del 1 al 5, donde 1 significa muy de acuerdo y 5 significa muy en desacuerdo.					
	De acuerdo			En Desacuerdo	
1. Comer una dieta saludable puede afectar mi salud física, así como mi salud mental y rendimiento académico.	1	2	3	4	5
2. Entiendo bien lo que es el modelo MiPlato.	1	2	3	4	5
3. Las frutas y verduras de diferentes colores aportan diferentes tipos de nutrientes para mi salud.	1	2	3	4	5
4. El cultivar mis alimentos puede afectar mi calidad nutricional, estado de salud y el ambiente a mi alrededor.	1	2	3	4	5

Opening Discussion (7-10 mins)

- **Ask the students:** *What is your idea of a healthy meal?*
 - Allow some discussion and validate answers as appropriate.
 - *Discuss that **healthy foods** include fruits and vegetables, whole grains, lean protein, low-fat dairy, and minimally processed items such as frozen or canned foods.
- Comparing foods: Show images of fresh foods vs processed foods (Examples: fresh fruit vs fruit drink, cooked potato vs potato chips, etc.). **Ask the students** to select what they think is the healthier choice and invite them to explain why they think so.

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- *Fresh foods are more nutritious and better for our health than processed foods because they still contain all the nutrients and no added ingredients. When fresh foods are processed to make chips, juice, or sweets, nutrients are lost.*

*Briefly discuss that it is important to **choose and consume more fresh foods to obtain the most nutrients and health benefits** from food. More details to follow on this topic in the next section.

Educational Session (25-30 mins)

I. Why do we eat healthily? (Objective 1; ~5 mins)

- **Ask the students:** *What are some benefits of eating healthily?*
 - Allow some discussion and validate answers as appropriate.
 - *Discuss the following:
 1. **Growth:** *At this point, your body may still be growing and developing. It is important that you eat enough good quality food to meet your body's needs.*
 2. **Academic Performance:** *When studying, your brain needs extra energy. Eating healthy foods can help with memory and better concentration.*
 3. **Sports:** *Eating good foods can boost stamina and endurance, helping you play better. Healthy foods after a game are also necessary for adequate recovery.*
 4. **Physical Health:** *A nutritious diet helps us maintain a healthy weight, improve digestion and reduce the risk of diseases like heart disease, bone loss, and diabetes.*
 5. **Mental Health:** *Food can influence mood and boost feel-good chemicals in the brain!*

II. How do we eat healthy? (Objectives 2, 4; ~10 mins)

- A. My Plate** (Spanish Version: <https://www.myplate.gov/resources/graphics/myplate-graphics>; <https://salud-america.org/usda-launches-miplato-for-spanish-speaking-consumers%E2%80%8E>)
- **Ask the students** if they are familiar with the idea of MyPlate.
 - *Discuss the following. Include culturally appropriate examples of each food group.
 - *One way that we can make sure that we are eating healthy is by using MyPlate. MyPlate is a guide that helps us plan and prepare healthy balanced meals.*
 - **There are 5 different food groups represented on MyPlate: grains, protein, vegetables, fruits, and dairy.**
 1. *Fill half your plate with fruits and vegetables (zucchini, spinach, mushroom, tomatoes, peppers, pineapple, papaya, mango, etc.).*
 - Serving size for fruits = 1 cup; aim for 2 cups/day.
 - Serving size for veggies = ½ cup cooked, 1 cup raw; aim for 2 ½ cups/day.
 2. *When possible, choose whole grains such as brown rice or corn tortillas. These foods are important to provide us with energy.*
 - Serving size = 1 slice of bread, 1 cup ready to eat cereal, or ½ cup cooked grains; aim for at least 6 servings/day.
 3. *Choose proteins such as beans, fish, and poultry. These foods provide building materials for growth and strength.*

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- Serving size = 1 egg, 1 tbsp nut butter, 3 oz of meat or fish, or ¼ cup cooked beans; aim for at least 5.5 servings/day.

4. *Choose low-fat dairy products as much as possible.*

- Serving size = 1 cup milk/yogurt, 1½ oz natural cheese; aim for 3 cups/day.

- **Serving size** visuals: Refer students to the models on the tables to observe representations of serving sizes. You may display several options:

- 3 different plates with three different pre-measured serving sizes
- 4 oz of orange juice, with number of oranges juiced per glass
- Food models with plates at each station
- Myplate Placemats

B. Eat the Rainbow

- Show a slide with produce of different colors. *Discuss:
 - *As you saw in the MyPlate guide, fruits and vegetables should be the largest component of our meals. That is because they are so good for us! But something that we want to remember is to include fruits and vegetables of a variety of colors.*
 - *At this point, incorporate any feedback from the opening activity. For example, you may reference the colors the students noticed in the sampled foods.
 - ***Eating a variety of fresh foods instead of the same ones over and over again can increase the nutrition we receive and improve our diet in general. The different colors in fruits and veggies reflect the different types of phytonutrients found in each color. Phytonutrients are natural compounds made by plants that have protective or disease preventive properties for us. In addition, vegetables contribute different types and quantities of vitamins and minerals.***
- Show images of different foods. *Discuss:
 - **Green** (cucumbers in sample recipe, spinach, broccoli) – provide vitamins K and C, iron, and calcium. Leafy greens help protect us against cancer, reduce the risk of eye problems.
 - **Orange and yellow** (sweet potatoes, carrots, pineapple) – provide the most vitamin A, help us see at night when it's dark, protect against cancer, help keep our heart healthy.
 - **Red** (tomatoes in recipe, watermelon, red apples) – provide vitamin A and lycopene, which help protect against cancer and infections.
 - **Purple and blue** (plums, purple cabbage, blueberries) – provide us with anthocyanins that protect against heart disease, help brain and memory function, and may slow aging.
 - **White and tan** (cauliflower, garlic, onions) – protect against cancer.
- **Ask the students:** *What are some ways that we can include more fruits and vegetables of different colors in our foods?*
 - Allow discussion and validate answers as appropriate. Show images of smoothies, dips, soups, and sandwiches. *Discuss how fresh foods were incorporated into the recipes.

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ACTIVITY BREAK: Fruit and Vegetable Name Game

Divide students into two teams and distribute the game worksheet. The teams have 60 seconds to think of as many fruits and vegetables as they can and write them in the correct column according to their color. Review answers and encourage students to eat a variety of colorful fruits and vegetables every day.

Fruit and Vegetable Name Game Worksheet				
Juego de Palabras Frutas y Verduras				
Green/Verde	Orange/Yellow Anaranjado/ Amarillo	Red/Rojo	Purple/Blue Violeta/Azul	White/Tan Blanco/Crema

III. Growing our Food (Objective 3; ~5 mins)

- Explain to students that, unfortunately, many people do not eat enough fresh fruits and vegetables for a variety of reasons. Reasons could include personal taste preferences, lack of culinary knowledge (how to use or prepare fresh foods), or lack of access to fresh foods.
- Point out the connection between nutrition education and RTP: *“One way to increase consumption of fruits and vegetables is by growing our own foods, such as what you will be doing with RTP. Gardening increases positive attitudes towards fresh foods, improves our knowledge of nutrition, and increases access to food in areas where fruits and vegetables may be hard to obtain.”*
- **Ask the students:** *What do you know about the benefits of growing your own food and eating local foods?* Allow discussion and validate answers as appropriate. *Explain other benefits of fresh, locally grown foods:
 - **Freshness and flavor:** *Did you know that most food travels 1,500 miles before it gets to your plate? Locally grown food is most fresh and flavorful because it's picked at the right time and doesn't travel far.*
 - **Lower cost:** When we use food from our garden or purchase locally grown produce, it usually costs less.
 - **Less food waste:** Freshly picked produce may last longer in the refrigerator.
 - **Sustainability:** Less money and contamination resulting from food transport.
 Show the Barilla Pyramid: https://www.barillacfn.com/en/dissemination/double_pyramid/
 Emphasize how those foods that we should be focusing on for good health also have a lower strain on the environment.

IV. Closing Activity (~5-10 mins) [optional]

Meal Makeover: Beef Tacos

Have students try transforming a regular meal into a more wholesome option. They might come up with ideas for making the recipe meatless, vegan, higher in fiber, lower in fat or salt, etc.



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RECIPE (<https://cookingwithcocktailrings.com/crispy-ground-beef-tacos/>)

- 1 package of taco seasoning
 - Vegetable oil for frying
 - 10 small taco-size corn tortillas
 - 1 pound 85/15 ground beef
 - Shredded iceberg lettuce, for serving
 - 2 medium tomatoes, cored and diced
 - ½ cup sour cream
 - ¼ cup shredded Monterey Jack cheese
 - ¼ cup shredded sharp Cheddar cheese
1. Fill a medium cast-iron skillet with enough oil to reach 1-inch up the sides. Fry the tortillas until golden brown, about 1 minute.
 2. Heat a large cast-iron pan over medium heat, add 2 tablespoons of the frying oil. Add the ground beef and cook until browned, about 6 minutes. Stir in the taco seasoning and ½ cup of water, stirring to combine.
 3. Fill each of the crispy shells with meat then top with shredded lettuce, tomato, sour cream, and cheese.

Possible recipe modifications:

- Use lean beef or ground lean poultry.
- Replace taco seasoning for spices
- Use low-fat sour cream/cheese.
- Make vegetarian: use tofu, eggs, or beans.
- Skip frying, or bake the tortilla.
- Replace these with avocado/ salsa/yogurt.

Cooking Activity: Salsa (~45 mins)

I. Basic salsa recipe

MATERIALS

- | | | |
|--------------------------|----------------------|--------------------|
| ● Ingredients | Mixing bowls, spoons | Blender [optional] |
| ● Cutting boards, knives | To-go containers | Juicer |

INGREDIENTS

- | | |
|--|--------------------------------------|
| ● 2 cups of tomatoes | ● 1 lime, juiced |
| ● 2 cloves garlic roughly chopped | ● 1/2 teaspoon salt or more to taste |
| ● 1/2 cup diced onion | ● 1/2 teaspoon pepper |
| ● 1 jalapeno seeded and roughly chopped | ● 1 1/2 teaspoons sugar |
| ● 1/2 bunch cilantro washed, about 1 cup | ● 1/4 teaspoon cumin |

**Extra ingredients that students can add to get creative:

Pineapple, mango, strawberry, corn, mint, cilantro, white/red/yellow onion, sweet or spicy peppers, black/white beans, cucumbers, tomatillos, avocado, etc.

Quick notes about available ingredients:

- Yellow onions have a nice balance of astringency and sweetness in their flavor, becoming sweeter as they cook. White onions have a sharper and more pungent flavor than yellow

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onions. Vidalia onions lack the sharp, astringent taste of other onions and really do taste sweet.

- Cubanelle peppers are not spicy, but they're not quite as mild as regular sweet peppers. Raw Cubanelles have a pleasing snap and tender texture. Bell peppers are sweet, juicy, and crunchy. Poblano, jalapeño, and serrano peppers are spicy.
- Beefsteak tomatoes are juicy and have high water content. Roma tomatoes are tangy and relatively dry.

INSTRUCTIONS

Chop and combine all the ingredients in a bowl. If you want a smoother texture, pulse half the salsa in a food processor, then combine it with the remaining chunky half.

Cover and refrigerate for up to 5 days. NOTE: Perishable foods should never stay out of the fridge for > 2 hours!

II. Basic Food Preparation Skills (Instructors may walk around and demonstrate techniques to students. Make sure students are properly holding a knife and following safety precautions.)

- Wash produce thoroughly under running water. Remove stems, seeds, and peel as needed.
- Knife skills
 - Use sharp knives carefully over a flat, stable surface. Grip the knife firmly by the handle.
 - Form a claw with the fingers of the guiding hand to keep them protected.
 - Cut food into uniform shape and size pieces - they look attractive and cook more evenly.
 - For naturally round foods, cut a slice of the food to make it sit flat on the cutting board.

Post Evaluation (5-7 minutes)

Lesson 1: Fruits and Vegetables 101, Post-Test

Please rate the following statements on a scale from 1 - 5, with 1 being strongly agree and 5 being strongly disagreeing.

	Agree			Disagree	
	1	2	3	4	5
1. Eating a healthy diet can affect my physical health as well as my mental health and academic performance.	1	2	3	4	5
2. I have a good understanding of what MyPlate is.	1	2	3	4	5
3. Fruits and vegetables of different colors contribute different types of nutrients to my health.	1	2	3	4	5
4. Growing my food can impact my nutrition quality, health, and the surrounding environment.	1	2	3	4	5

Please rate the following statements on a scale from 1 - 5, with 1 being very satisfied and 5 being very dissatisfied.

	Very Satisfied			Very Dissatisfied	
	1	2	3	4	5
5. How satisfied are you with the information you received?	1	2	3	4	5

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6. How satisfied are you with the instructors you had?	1	2	3	4	5
7. How satisfied are you with the recipe we cooked?	1	2	3	4	5
8. How satisfied are you with the duration of the lesson?	1	2	3	4	5
	Very Likely			Not at all likely	
9. How likely are you to refer a friend to this program/lesson?	1	2	3	4	5
10. Please share any comments or suggestions you may have.					

Lección 1: Frutas y verduras 101, Post-prueba

Califique las siguientes afirmaciones en una escala del 1 al 5, donde 1 significa muy de acuerdo y 5 significa muy en desacuerdo.

	De acuerdo		En Desacuerdo		
1. Comer una dieta saludable puede afectar mi salud física así como mi salud mental y rendimiento académico.	1	2	3	4	5
2. Entiendo bien lo que es el modelo MiPlato.	1	2	3	4	5
3. Las frutas y verduras de diferentes colores aportan diferentes tipos de nutrientes para mi salud.	1	2	3	4	5
4. El cultivar mis alimentos puede afectar mi calidad nutricional, estado de salud y el ambiente a mi alrededor.	1	2	3	4	5

Califique las siguientes afirmaciones en una escala del 1 al 5, donde 1 significa muy satisfecho y 5 muy insatisfecho.

	Muy Satisfecho		Muy Insatisfecho		
5. ¿Qué tan satisfecho está usted con la información que recibió?	1	2	3	4	5
6. ¿Qué tan satisfecho está usted con los instructores que tuvo?	1	2	3	4	5
7. ¿Qué tan satisfecho está usted con la receta que cocinamos?	1	2	3	4	5
8. ¿Qué tan satisfecho está usted con la duración de la lección?	1	2	3	4	5
	Muy probable		Nada probable		
9. ¿Qué tan probable es que usted recomiende este programa a un amigo?	1	2	3	4	5
10. Por favor comparta cualquier comentario o sugerencia que tenga.					

Fresh Foods Nutrition: Benefits of Fruits & Vegetables

Healthy Foods

Include fruits and vegetables, whole grains, lean protein, low-fat dairy, and minimally processed items such as frozen or canned foods. **Fresh foods are more nutritious and better for our health** than processed foods because they still contain all the nutrients and no added ingredients.

Why eat healthy?

A nutritious diet helps us **grow strong, perform better in school and in sports**, and maintain good **physical and mental health**.

How to eat healthy?

1



- Fill half your plate with fruits and vegetables.
- Choose whole grains such as brown rice or whole wheat pasta.
- Choose proteins such as beans, fish and poultry. These foods provide building material for growth and strength.
- Choose low fat dairy products as much as possible.

2



- Green foods provide vitamin K, C, iron and calcium.
- Orange and yellow foods provide vitamin A, which helps keep our vision and our heart healthy.
- Red and white foods help protect us against cancer and infections.
- Purple and blue foods protect against heart disease, help brain function, and may slow aging.

3



- Growing food increases positive attitudes towards fruits and veggies, improves knowledge of nutrition, and increases access to food in areas where fresh foods may be hard to obtain.
- Locally grown foods are usually fresher, more flavorful, cost less, result in less food waste and help increase the sustainability of the food system.

Fresh Foods Cooking: Chunky Salsa Recipe

So many options!

Salsa is a great way to use fresh ingredients and add flavor to your favorite dishes. The following is a basic recipe for a traditional tomato salsa. However, feel free to customize it and explore with different flavors and textures!

Ingredients

- 2 cups of tomatoes
- 2 cloves garlic, roughly chopped
- 1/2 cup diced onion
- 1 jalapeño, seeded and roughly chopped
- 1/2 bunch cilantro washed, about 1 cup
- 1 lime, juiced
- 1/2 teaspoon salt or more to taste
- 1/2 teaspoon pepper
- 1 1/2 teaspoons sugar
- 1/4 teaspoon cumin



Directions

- Chop and combine all the ingredients in a bowl.
**If you want a smoother texture, pulse half the salsa in a food processor, then combine it with the remaining chunky half.
- Cover and refrigerate for up to 5 days.
**NOTE: Perishable foods should never stay out of the fridge for > 2 hours.



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References

- Cleveland Clinic. (2021, January 12). *Does What You Eat Affect Your Mood?*
<https://health.clevelandclinic.org/bad-mood-look-to-your-food/>
- Cook Fresh at Farmers Markets Curriculum [Pamphlet]. (2019). New York City Department of Health and Mental Hygiene.
<https://www1.nyc.gov/assets/doh/downloads/pdf/cdp/cook-fresh-curriculum-lessons.pdf>
- High School Lesson Plan: Fruit and Vegetables. (2016). Drexel University.
https://deptapp08.drexel.edu/nutritioneducation/Website_Materials/FY17%20Curriculum/DRX%20HS%20Fruit%20%20Vegetables%20Lesson%20Plan.pdf
- NJ Department of Agriculture. (n.d.). *Overview of Agriculture in the Garden State*.
<https://www.nj.gov/agriculture/about/overview.html>
- Ohio SNAP-Ed Adult & Teen Programs. (2015). *Color Your Diet with Vegetables & Fruits*. The Ohio State University.
<https://fcs.osu.edu/sites/fcs/files/imce/PDFs/lesson-plan-color-your-diet-with-vf.pdf>
- Seed to Plate. (2011). Jones Valley Urban Farm.
<https://edibleschoolyard.org/sites/default/files/Seed%20to%20Plate%20Curriculum.pdf>
- Stroop, R. (2021, May 7). *What's Growing? New Jersey Produce Calendar*. Farm Flavor.
<https://farmflavor.com/new-jersey/new-jersey-farm-to-table/whats-growing-new-jersey-produce-calendar/>

Lesson # 2: Fruits and Vegetables: How To's

Lesson Goals and Objectives	High school-aged growers will: 1. Learn how to prepare and market for meals that are nutritious and budget-friendly. 2. Develop cooking skills while preparing a nutritious, fresh produce-based meal together with their instructors.
Duration	Approximately two (2) hours (including time for questions and transitions).
Materials	<ul style="list-style-type: none"> ● Presentation/Slideshow ● White paper or notepad, markers, pens ● Ingredients and cooking equipment for the selected recipe: Sofrito, Picadillo ● Recipes and handouts ● Pre- and post-tests

LESSON PLAN

* Talking points and suggestions are indicated in *Italics>*.

* Key concepts are **boldfaced**.

Welcome (5-7 mins)

- Greet participants, distribute handouts and introduce yourself and the program.
- Explain the sections of the workshop (educational part, hands-on cooking activity).
- Explain that translators will be present during the workshop to help students as needed.
- Distribute the pre-test questionnaire and allow time for students to answer.

Lesson 2: Fruits and Vegetables How To's, Pre-test

Please rate the following statements on a scale from 1 - 5, with 1 being strongly agree and 5 being strongly disagreeing.

	Agree				Disagree
	1	2	3	4	5
1. I feel confident in my ability to choose good quality fresh fruits and vegetables.	1	2	3	4	5
2. I am familiar with at least 2-3 healthy cooking methods.	1	2	3	4	5
3. I can think of several ways to repurpose extra/leftover food.	1	2	3	4	5
4. I understand that there are legal requirements that must be met for the sale of prepared foods.	1	2	3	4	5

Lección 2: Cómo usar frutas y verduras, Pre-prueba

Califique las siguientes afirmaciones en una escala del 1 al 5, donde 1 significa muy de acuerdo y 5 significa muy en desacuerdo.

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	De acuerdo		En Desacuerdo		
1. Me siento confiado(a) en mi capacidad para elegir frutas y verduras frescas de buena calidad.	1	2	3	4	5
2. Estoy familiarizado con al menos 2-3 métodos saludable para la preparación de alimentos.	1	2	3	4	5
3. Puedo pensar en varias maneras de reutilizar la comida extra o sobrante.	1	2	3	4	5
4. Entiendo que existen requisitos legales que deben satisfacerse para la venta de alimentos preparados.	1	2	3	4	5

Opening Activity/Ice Breaker (4-5 mins)

Opening Discussion (4-5 mins)

- Show an image of a carrot. **Ask students:** *How many ways could you cook carrots?*
 - Allow some discussion and validate answers as appropriate. The students may suggest methods such as eating the carrots raw, boiled, or baked.

*Discuss:

 - Many fruits and vegetables can be eaten raw such as carrots or spinach.
 - As an example, carrots may be prepared in many ways: 1) boiled, 2) steamed, 3) sautéed, 4) roasted/grilled, 5) baked (like in carrot cake), 6) braised/poached, 7) microwave cooked, or 8) pan-fried/air fried. You may show a picture of the different methods, or mention a few, but do not go into too much detail. The methods will be explained in detail later in the lesson.
- Explain that this lesson will address the ABCs of working with fresh fruits and vegetables, from selecting fresh produce to cooking with it. Invite students to participate in the class to make it more conversational and translatable to the hands-on activity.

Educational Session (Objective 1, 35-40 mins)

I. Choosing and Storing Fresh Produce (5-7 mins)

- Show an image of a farmer's market or the produce section of a food store.
Ask the students: *The first step in eating more fruits and vegetables is acquiring them. Does anyone know how we **choose good quality fruits and vegetables?***
 - Allow some discussion and validate answers as appropriate.

*Discuss the following talking points, use infographics:

 1. **Seasonal produce:** *Seasonal produce will be of higher quality!*
 2. **Texture:** *Avoid produce that is moldy, bruised, or injured, or that shows signs of insect damage. Sliminess or mushiness indicates a lack of freshness in all produce.*
 3. **Color:** *Choose produce that has bright, vibrant colors and unwrinkled skin.*
 4. **Touch:** *Ripe, quality fruits and veggies should feel crisp and firm, but yield somewhat when gently pressed.*

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5. **Shape:** *Don't pay too much attention to the shape of foods. Oddly shaped food may not be as beautiful, but it is still delicious and packed with nutrition.*
- Introduce fresh produce storage: *Part of making the best use of fruits and vegetables is to store them adequately. This will help preserve their flavor and keep them fresh for longer.*

POP-TRIVIA: *Where would you store ... tomatoes? Potatoes? Lettuce? Apples?* Allow some discussion and validate answers as appropriate.

- Show an image of food storage guidelines and discuss the storage recommendations.

Suggested visuals:

<https://rachelnourishingkitchen.com/stretch-your-fresh-food-dollars-how-to-properly-store-fruits-veggies/>

<https://www.halfyourplate.ca/fruits-and-veggies/store-fruits-veggies/>

<https://www.quora.com/Are-there-certain-fruits-which-are-better-stored-outside-of-a-refrigerator-or-container>

II. Healthy Cooking Methods (~8 mins)

Now that we know how to choose and store fresh produce, let's talk about cooking with it.

*Earlier today we talked about different ways we can cook carrots. Now we will talk in more detail about some **healthy food preparation techniques**.*

- **Ask the students:** *Does anyone have a particular cooking method they prefer?*
 - Allow some discussion and validate answers as appropriate.
 - * Discuss 3* of the following; choose whatever is most applicable for the audience:
NOTE: These methods are preferable to techniques such as frying because the fat needed to fry adds to the calorie count of foods. Additionally, heating oil at high temperatures may result in the oxidation of the oil. Oxidized oils can, in turn, have a negative impact on your health.
1. **Baking*:** *Most foods can be baked. Place food in the oven, covered or uncovered. Baking generally doesn't require added fats.*
 2. **Blanching:** *Foods are dropped into boiling water for 1-2 minutes and then cooled in an ice bath. With this method, veggies stay crisp and tender at the same time.*
 3. **Braising/poaching:** *Both methods involve cooking foods slowly while partially covered with a small quantity of liquid, such as water or flavorful broth.*
 4. **Pressure cooking:** *Food is cooked at high pressure and temperatures. The cooking time is much shorter than boiling, and fewer nutrients are lost in the process.*
 5. **Roast/Broil*:** *Similar to baking, but at higher temperatures. When roasting veggies, be mindful of the type and amount of oil you use (think avocado or canola).*
 6. **Sauteing*:** *Small, thin pieces of food are quickly cooked in a hot pan. If you choose a good-quality nonstick pan, you can cook without fat. Alternatively, use a cooking spray or apply a small amount of oil with a pastry brush.*
 7. **Steaming*:** *Food is cooked in a perforated basket above simmering liquid. This method preserves more nutrients, flavor, and texture than boiling vegetables.*
 8. **Stir-frying:** *Small pieces of food are cooked in a small amount of fat while rapidly stirred in a wok or large nonstick frying pan. Due to the short cooking time, not much nutritional content is lost.*

III. Reducing food waste and repurposing food (~7-10 mins)

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Rowan University's Health & Exercise Science (HES) Department
Camden/Glassboro Collaboration

*Something that happens when we cook is that sometimes we have leftovers. We may have food scraps, extra food, or pieces of unused ingredients. Last class, we talked about how growing food can help increase sustainability. Another way we can do that is by **reducing food waste**.*

- **Ask the students:** *Does anyone have an idea of how much food is wasted in the USA?*

- Allow some discussion and validate answers as appropriate.

* Discuss:

- *The USDA estimates that 30-40% of the food supply in the USA goes to waste! In 2010, this corresponded to ~ 133 billion pounds and \$161 billion worth of food.*

- *Reference: <https://www.fda.gov/food/consumers/food-loss-and-waste>*

- Explain that food loss may occur for many reasons: spoilage, problems during processing or transporting, equipment malfunction (ex: faulty cold storage), over-ordering/food not sold, and food discarded by consumers at home.

- **Repurposing food can help** save money, provide more food for families, and conserve natural resources such as land, water, labor, and energy.

*Discuss ideas to repurpose food based on the talking points below. Use infographics.

1. Leftovers:

- a. Sauté veggies with a protein to make burritos, bowls, casseroles or stir-fry. Alternatively, mix the veggies with some greens and dressing to make a salad.
- b. Quesadillas, pizza, grilled cheese, and egg dishes are other ways to repurpose leftover cooked veggies.

2. Scraps:

- a. Make stock using bones from meat, carrot tops/peels, celery ends, onion skins/root ends, mushroom stems, herb stems, etc.
- b. The last bits of jam in the jar can be made into a salad dressing by adding equal parts of oil and vinegar to the jar.
- c. Add veggies to a jar of leftover pickle juice to make marinated veggies.
- d. Use fruit trims to make flavored water.

3. Food past its prime:

- a. Limp or wilted veggies can sometimes be revived by submerging them in cold water. Alternatively, add them to smoothies or soups.
- b. Stale bread can be cut and baked to make into croutons or breadcrumbs.
- c. Milk that is past the use date and is a little sour (but not spoiled!) may be used just like buttermilk for baking.

ACTIVITY BREAK (OPTIONAL): From Scraps to Supper

Pretend you have the following foods at home:

- | | | |
|-----------------------------|---------------------------------|---------------------|
| - cooked beef/chicken | - leftover chopped celery/onion | - ½ jar pasta sauce |
| - cooked mixed veggies | - cooked rice | - day old bread |
| - Spinach, starting to wilt | - overripe fruit | |

Divide the students into 2 teams. Ask the students: *How can they transform this into a meal?*

Give the students 2-3 minutes to come up with ideas. Review answers and encourage students to be creative in their choices.

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Rowan University's Health & Exercise Science (HES) Department
Camden/Glassboro Collaboration

Possible answer: <https://www.thespruceeats.com/texas-style-ground-beef-rice-casserole-3057416>

- Make a casserole: Sauté spinach and veggies, make breadcrumbs from the bread. In a baking dish, layer the rice, beef, sauce, and veggies. Top with cheese and breadcrumbs. Bake until bubbly.
- Dessert: Blend fruit and freeze to make "nice cream".

IV. Preparing food for sale (2-3 min)

*Mention this part as a disclaimer, don't go into depth. Refer students to the website.

*Encourage students to find the right information before selling any food products.

Preparing food for sale is a great idea, but also a big responsibility. Improperly prepared food can cause illness. Therefore, there are legal rules that must be followed when making foods for sale. Each state has its own rules. Here in NJ, we must follow these:

- Food must be prepared in a commercial kitchen, licensed, and inspected.
- If you are producing an acidified (ex: pickled vegetables) or low acid canned food (ex: canned beans), you must register your facility and your recipe/process with the FDA. Your process also needs to be evaluated by an approved food laboratory.
<https://www.fda.gov/guide-inspections-low-acid-canned-food-2>
<https://extension.psu.edu/acidified-and-low-acid-food-regulatory-requirements>
- Containers shall be unbroken, clean, and free of dents, defects.
- Product shall be labeled "Keep Refrigerated".
- Product label shall contain: 1) name and address of seller or processor; 2) name of product; 3) ingredient list in descending order; and the net weight of the product.

Tools: www.foodlabelmaker.com

IV. Closing Activity (OPTIONAL, 5-10 mins)

Marketing your salsa and sofrito

Challenge students to design an ad for the product of their choice (salsa or sofrito). The ad can be designed for social media, print, billboards, flyers, etc. The goal is to convince consumers to buy and consume the product that the students are promoting. Review the designs and reinforce any nutrition concepts as needed.

Cooking Activity: Sofrito and Picadillo (Objective 2, ~60 mins)

I. Sofrito Recipe (Adapted <https://www.seriousseats.com/sofrito-puerto-rican-how-to-make-recipe>)

- Sofrito is a cooking base used in Spanish, Italian, Portuguese, and Latin American cooking. The word sofrito is Spanish and means to lightly fry something by sautéing or stir-frying.
- Why make sofrito? These veggies can be grown here in NJ and sofrito is a good use of fresh garden ingredients. The recipe is versatile and is a good example of a food that we can sell.

MATERIALS

- Ingredients
- Food processor
- Cutting board, knives
- To-go containers

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Camden/Glassboro Collaboration

INGREDIENTS

- 4-5 Garlic cloves
- 1 onion, quartered
- 2 Peppers, quartered
- Optional add-ins (herbs, tomatoes, etc.)

**Extra ingredients that students can use to get creative:

Tomato, herbs (cilantro, culantro, oregano, parsley), spices (cumin, turmeric, paprika), or acid (lemon juice, vinegar).

SOFRITO INSTRUCTIONS

Add ingredients to the bowl of a food processor and blend until smooth. Transfer the sofrito to a glass container and store it in the refrigerator for up to three days, or freeze.

II. Picadillo Recipe (Adapted <https://www.goya.com/en/recipes/picadillo>)

MATERIALS

- Ingredients
- Cutting boards, knives
- bowls, spoons
- To-go containers
- Large pans

INGREDIENTS

- 1 lb ground turkey
- 2 tbsp olive oil
- 1 yellow onion, diced
- ½ cup sofrito
- ½ cup tomato sauce
- 10 Manzanilla olives, chopped
- 1 tbsp cider vinegar
- ¼ tsp cumin
- 1 tsp paprika
- 2-4 tbsp water or cooking wine
- Salt and pepper to taste
- Optional: tomatoes (fresh or canned), raisins, roasted peppers, chili/cayenne, etc.

INSTRUCTIONS

1. In a large skillet, heat the olive oil over medium-high heat.
2. Add the onions and saute for ~5 minutes, stirring frequently so they don't burn.
3. Add the sofrito and continue to cook, stirring frequently, for another 4 minutes until the onions are soft and golden.
4. Add the tomato sauce. Stir and cook for another 2 minutes until caramelized.
5. Add the turkey and cook, stirring with a wooden spoon to break up any lumps. Cook for another 3 minutes until browned.
6. Add the vinegar, spices, cooking wine or water (as needed), any optional add-ins (except raisins), and season with salt and pepper.
7. Bring the mixture to a boil, and reduce to a simmer.
8. Cook uncovered for 10 minutes until mixture is thick.
9. Stir in the olives, and the raisins (if using).
10. Serve over rice or with your favorite starch (potatoes, bread (as a Sloppy Joe), tostones, noodles, etc.)

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Quick Notes about ingredients:

- Choose a turkey product that is 93% lean. This is a combination of white and dark meat with less fat than the 80/20 or 85/15 ground turkey. Lean turkey (99%) tends to be too dry.

Depending on the type of vegetables you use (white, red, or Vidalia onions; cubanelle, bell, or jalapeno peppers, etc.), your dish may have an entirely new flavor.

- Yellow onions have a nice balance of astringency and sweetness in their flavor, becoming sweeter the longer they cook. White Onions have a sharper and more pungent flavor than yellow onions. Vidalia onions lack the sharp, astringent taste of other onions and really do taste sweet.

- Cubanelle peppers are not spicy, but they're not quite as mild as regular sweet peppers. Raw Cubanelles have a pleasing snap and tender texture. Bell peppers are sweet, juicy, and crunchy. Poblano, jalapeño, and serrano peppers are spicy.

- Parsley has a peppery flavor and subtly bitter undertone, while cilantro has a much stronger, spicy, citrusy aroma. Culantro (aka 'broadleaf cilantro/cilantro de hoja ancha' or 'recao') is a botanical cousin of cilantro commonly used in the Caribbean, Central American, and South American cuisine. However, culantro is significantly more pungent and stronger than cilantro. Culantro can also handle the high heat of cooking, whereas cilantro cannot.

II. Food Safety Skills to Reinforce

- Wash hands thoroughly; rinse all produce.
- Separate foods such as raw meats, seafood, and poultry from ready-to-eat foods.
- Cook foods to the right temperature to kill germs that make you sick.
- Refrigerate food within two hours.

Post Evaluation (5-7 minutes)

Lesson 2: Fruits and Vegetables How To's, Post-test

Please rate the following statements on a scale from 1 - 5, with 1 being strongly agree and 5 being strongly disagree.

	Agree			Disagree	
	1	2	3	4	5
1. I feel confident in my ability to choose good quality fresh fruits and vegetables.	1	2	3	4	5
2. I am familiar with at least 2-3 healthy cooking methods.	1	2	3	4	5
3. I can think of several ways to repurpose extra/leftover food.	1	2	3	4	5
4. I understand that there are legal requirements that must be met for the sale of prepared foods.	1	2	3	4	5

Please rate the following statements on a scale from 1 - 5, with 1 being very satisfied and 5 being very dissatisfied.

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	Very Satisfied		Very Dissatisfied		
5. How satisfied are you with the information you received?	1	2	3	4	5
6. How satisfied are you with the instructors you had?	1	2	3	4	5
7. How satisfied are you with the recipe we cooked?	1	2	3	4	5
8. How satisfied are you with the duration of the lesson?	1	2	3	4	5
	Very Likely		Not at all likely		
9. How likely are you to refer a friend to this program/lesson?	1	2	3	4	5
10. Please share any comments or suggestions you may have.					

Lección 2: Cómo usar frutas y verduras, Post-prueba

Califique las siguientes afirmaciones en una escala del 1 al 5, donde 1 significa muy de acuerdo y 5 significa muy en desacuerdo.

	De acuerdo		En Desacuerdo		
1. Me siento confiado(a) en mi capacidad para elegir frutas y verduras frescas de buena calidad.	1	2	3	4	5
2. Estoy familiarizado con al menos 2-3 métodos saludable para la preparación de alimentos.	1	2	3	4	5
3. Puedo pensar en varias maneras de reutilizar la comida extra o sobrante.	1	2	3	4	5
4. Entiendo que existen requisitos legales que deben satisfacerse para la venta de alimentos preparados.	1	2	3	4	5

Califique las siguientes afirmaciones en una escala del 1 al 5, donde 1 significa muy satisfecho y 5 muy insatisfecho.

	Muy Satisfecho		Muy Insatisfecho		
5. ¿Qué tan satisfecho está usted con la información que recibió?	1	2	3	4	5
6. ¿Qué tan satisfecho está usted con los instructores que tuvo?	1	2	3	4	5
7. ¿Qué tan satisfecho está usted con la receta que cocinamos?	1	2	3	4	5
8. ¿Qué tan satisfecho está usted con la duración de la lección?	1	2	3	4	5
	Muy probable		Nada probable		
9. ¿Qué tan probable es que usted recomiende este programa a un amigo?	1	2	3	4	5
10. Por favor comparta cualquier comentario o sugerencia que tenga.					

Fresh Foods Nutrition: Fruits & Vegetables How To's

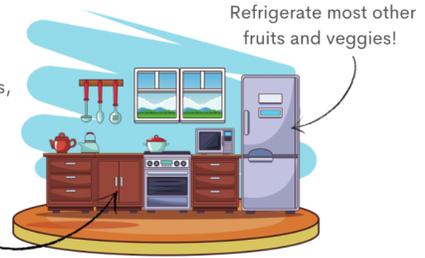
Choose Quality Produce



Store Produce

Room temp, then refrigerate:
 Bananas, tomatoes, citrus, stone fruits

Cool, dark place:
 Garlic, onions, potatoes, hard squash



Cook with Produce



Repurpose Food

- Sauté leftover veggies with a protein to make burritos, bowls, casseroles or stir-fry. Or make a salad!
- Use scraps to make stock.
- Use fruit trims to make flavored water.
- Limp or wilted veggies can sometimes be revived by submerging them in cold water. Alternatively, add them to smoothies or soups.
- Stale bread can be cut and baked to make into croutons or breadcrumbs.
- Milk that is a little sour (but not spoiled!) may be used like buttermilk for baking.



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Fresh Foods Nutrition: Fruits & Vegetables How To's

Sofrito

Sofrito is a cooking base used in Spanish, Italian, Portuguese and Latin American cooking. Sofrito is versatile and it is a great way to use fresh garden ingredients.

Ingredients

- 2 cups
- 4-5 Garlic cloves
- 1 onion, quartered
- 2 Peppers, quartered
- Optional add-ins (herbs, tomatoes, acid, spices, etc.)



Directions

1. Add ingredients to the bowl of a food processor and blend until smooth.
2. Transfer the sofrito to a glass container and store in the refrigerator for up to three days, or freeze.

Picadillo

Use your sofrito in this yummy recipe. You can make picadillo with ground turkey, chicken or beef. Use it to top rice, mashed potatoes, or even bread.

Ingredients

- 1 lb ground turkey
- 2 tbsp olive oil
- 1 yellow onion, diced
- ½ cup sofrito
- ½ cup tomato sauce
- 10 Manzanilla olives, chopped
- 1 tbsp cider vinegar
- ¼ tsp cumin
- 1 tsp paprika
- 2-4 tbsp water or cooking wine
- Salt and pepper to taste
- Optional: tomatoes (fresh or canned), raisins, roasted peppers, chili/cayenne, etc.



Directions

1. In a large skillet, heat the olive oil over medium high heat.
2. Add the onions and saute for ~5 minutes, stirring frequently so they don't burn.
3. Add the sofrito and continue to cook, stirring frequently, for another 4 minutes until the onions are soft and golden.
4. Add the tomato sauce. Stir and cook for another 2 minutes until caramelized.
5. Add the turkey and cook, stirring with a wooden spoon to break up any lumps. Cook for another 3 minutes until browned.
6. Add the vinegar, spices, cooking wine or water (as needed), any optional add-ins (except raisins) and season with salt and pepper.
7. Bring the mixture to a boil, and reduce to a simmer.
8. Cook, uncovered for 10 minutes, until mixture is thick.
9. Stir in the olives, and the raisins (if using).
10. Serve over rice or with your favorite starch (potatoes, bread as a Sloppy Joe, tostones, noodles, etc.)

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References

- Cook Fresh at Farmers Markets Curriculum* [Pamphlet]. (2019). New York City Department of Health and Mental Hygiene.
<https://www1.nyc.gov/assets/doh/downloads/pdf/cdp/cook-fresh-curriculum-lessons.pdf>
- lasevoli, B. (2021, February 8). *7 Nutrition Lesson Plans & Activities for High School Students*.
HMHCO. <https://www.hmhco.com/blog/nutrition-lesson-plans-activities-for-high-school-students>
- Minimum Food Safety Requirements for Product Sales Farm Markets and Community Farmers' Markets*. (n.d.). NJ Department of Agriculture.
<https://www.nj.gov/agriculture/divisions/md/pdf/farmmarketguidelines.pdf>
- Trowbridge Filippone, P. (2021, July 19). *What Is Culantro?* The Spruce Eats.
<https://www.thespruceeats.com/is-culantro-the-same-as-cilantro-1807011>
- USDA (n.d.). *MyPlate*. <https://www.myplate.gov/>
- White, R. (2019, February 12). *How to repurpose some of the most commonly wasted foods*. LeanPath. <https://blog.leanpath.com/repurpose-most-commonly-wasted-foods>