Samples From the

Hip Hop Healthy Heart Program for Children™

Module 3: Plant Power!
Plant-Based Nutrition for Healthy Kids!

Module 3: Plant Power! Plant-Based Nutrition for Healthy Kids! – includes 6 units:

Introduction
Unit 1: Fresh Feasting!
Unit 2: Fruitful Feasting!
Unit 3: At the Root of It All!
Unit 4: Growlin' for Grains!
Unit 5: Make Room for Legumes!
Unit 6: Let's Hear It for Veggies!
Plant-Based Workshop
Shop Well! Appendix

Each unit Includes:

- Teacher Background Information
- Two or three lesson plans, worksheets and answer keys designed for
  - K – 3rd grade students or
  - 4th – 6th grade students
- Enrichment activities for group or independent study in
  - K – 3rd grade
  - 4th-6th grade
- Appendix with additional worksheets and resources
- Aligns with the following:
  - Common Core State Standards for English, Language Arts and Literacy/Social Studies, Science and Technical Subjects
  - Common Core State Standards for Mathematics
  - Center for Disease Control Health Education Standards and Performance Indicators
  - National Physical Education Standards & Grade Level Outcomes published by Shape America – Society of Health and Physical Educators.

In this document:

1. **Module 3: Plant Power! Lesson Plan Summary *4-6th Grade* (pp. 2-5)**
2. **Lesson Plan for Unit 1, Lesson 1: *K-3rd Grade* (pp. 5-14)**
3. **Sample Activities from Unit 4, Lesson 3: *K-3rd Grade* (p. 15)**
4. **Enrichment Activity from Unit 1: *4th – 6th Grade* (p. 16)**
5. **Sample Activity from Unit 3, Lesson 3 : *4th–6th Grade* (pp. 17)**
6. **Samples from the Plant-Based Workshop *(pp. 18 - 21)***

Module 3: Plant Power! Lesson Plan Summary		
Unit	**Objectives**	**Activities/Worksheets**
1 **Why Eat?** **(3 Lessons)**	• Identify key reasons for eating • Explain the relationship between nutrition and health • Explain why plant-based nutrition supports heart health • Describe what comprises healthy plant-based nutrition • Understand what is meant by the "nutrient package" of a food • Explain why it is important to consider a food's calorie density • Describe differences between animal-based and plant-based nutrition • Explain how physical activity interacts with diet to sustain health	Plant-Based Handout Fresh Feasting! Rhyme Why Do I Eat? Worksheet Imagine a Pizza! Worksheet Yours to Choose Activity Guides Hmmm…Worksheet Investigate Hippocrates! Worksheet Go for Nutrients! Worksheet Plant-Based? Worksheet Game Day! Worksheet My Ode to ___! Worksheet Find Out More! Worksheet Getting Serious Worksheet Calories in/Calories Out Chart & Worksheet Calorie Density Worksheet Get Moving! Worksheet Short the Sugar! Worksheet Vocabulary Guide Quiz Letter to Parents
2 **Fruitful Feasting!** **(2 Lessons)**	• Identify key reasons for eating a variety of fruits • Describe characteristics of five groups of fruits • Be aware of the connection between fruit color and nutrients • Know the benefits of whole over processed fruits • Understand the connection between carbohydrates and energy • Differentiate between simple and complex carbohydrates • Differentiate between natural and refined sugars • Describe how other fruit-supplied nutrients – folate, fiber, potassium, Vitamin A, Vitamin C – support health • Be aware of the relationship between phytonutrients and health risk reduction	Go-To Fruit! Rhyme Enjoy Fruits! Worksheet Simple Carbs Worksheet Fruits in Color Worksheet Folates Handout Fiber/Potassium Handout Vitamins Handout Fruit Search! Worksheet Protein in Fruit? Worksheet Read Labels Handout Fruitful Choosing! Worksheet Fruitful Tracking Worksheet Yours to Choose Activity Guide Investigate Juice! Worksheet Snacks We Love! Worksheet Food Deserts Worksheet Vocabulary Guide Quiz

Module 3: Plant Power! Lesson Plan Summary		
Unit	**Overview**	**Activities/Worksheets**
3 **At the Root of It All!** **(3 Lessons)**	• Identify key reasons for eating a variety of tubers and root vegetables • Describe characteristics of tubers, root vegetables and bulbs • Explain the difference between simple and complex carbohydrates • Explain the relationship between starches and energy • Identify some key nutrients found in tubers and root vegetables • Describe the effect of fats and oils on a healthy diet • Identify key components of healthy soil • Understand the role of microbes in nutrition • Explain how growing practices can impact soil • Explain how the soil foods are grown in can impact nutrition	I'm Rooting for Roots! Rhyme Getting to Know Them Worksheet Root Veggies Handout Tubers and Bulbs Handout Get Moving – 2 Worksheet Yours to Choose! Activity Guide Cool Facts about …Handout Cool Facts about…Worksheet Root Sellers! Worksheet At Home! Worksheet Vocabulary Guide Quiz
4 **Growlin' for Grains!** **(2 Lessons)**	• Understand the role of whole grains in a healthy plant-based diet • Be able to name various whole grains • Explain how grain is formed • Compare characteristics of whole and refined grain foods • Discuss the health benefits of whole grains • Explain the connection between nutrition and the digestive process • Describe how grains are grown and processed • Consider how farming practices affect global health • Consider how marketing affects food choices • Understand why whole grains are important components of a healthy plant-based lifestyle	Growlin' for Grains Rhyme Grain Kernel Image Processed/Refined Comparison Chart Start the Day! Worksheet Ingredients List Worksheet Where Grains Grow in the U.S. Worksheet Keep Reading Labels Handout Read These Labels! Worksheet Groovin' Grain Scramble Worksheet Yours to Choose! Activity Guide Explore the Pantry! Worksheet Tortilla Test Worksheet To Market, To Market Worksheet Cool Facts Handouts (Barley, Wheat, Rice, Rye and Oats) Grain Growing Images Vocabulary Guide Quiz

Module 3: Plant Power! Lesson Plan Summary		
Unit	**Objectives**	**Activities/Worksheets**
5 **Make Room for Legumes!** **(2 Lessons)**	• Understand the role of beans and legumes in plant-based nutrition • Describe the health benefits of protein • Explain how plant-based nutrition meets protein consumption requirements • Understand the role of nuts and seeds in plant-based nutrition • Compare traditional and plant-based nutrition models relative to healthy fats	Little Guys! Rhyme Getting to Know Us! Worksheet Nutrients Galore! Worksheet Imagine a Taco! Worksheet Make Hummus! Worksheet Hmmm…Unit 5 Worksheet Learn about Little Guys Worksheet
6 **Let's Hear It for Veggies!** **(2 Lessons)**	• Discuss the value of eating whole, raw vegetables. • Discuss the health benefits of vegetables • Understand that they do not need to count portions with plant-based nutrition • Plan to take a first (or next) step into Plant-Based Nutrition	Parts We Eat Handout Parts We Eat Worksheet Cruisin' the Salad Bar Worksheet Fix Yourself a Salad Worksheet We're Veggies! Rhyme Just Steamin' Handout Phytonutrients Worksheet Easy Steps! Worksheet Easy Steps Challenge Planner Hmmm…Unit 6 Worksheet Vocabulary Guide Quiz Letter to Parents Cool and Colorful! Information Sheets
Plant-Based Workshop	Suggests additional learning project options for individuals, small groups or an entire class	The following are some of the activities included in the Plant-Based Workshops: Check for Sugar! Plant-Based and Sports? Heirlooms! Berry, Berry Good! More about Food Deserts Growing Concerns What Is a Lobbyist? Community Gardens Just Watch! Lunch Bunch Calcium Them Bones! Take It Outside Write a Play Host a Fair

Lesson 1 Highlights

Objectives: Students will

- Identify key reasons for eating.
- Explain the relationship between eating and nutrition
- Explain the relationship between nutrition and health
- Describe what comprises plant-based nutrition
- Describe how plant-based nutrition supports health

Anticipatory Activity:

For demonstration:

- Ball
- An example of a plant-based food: cereal, piece of fruit, or vegetable

Copy for each student:

- ***Let's Eat!*** **Rhyme**

Using the ball, the food item and the ***Let's Eat!*** **Rhyme**, briefly explain why nutrition is important. Find information in A-I at right.

Lesson Materials:

Copy for each student:

- ***Why Do I Eat?*** **(Chart or Circle) Worksheet**
- ***MyPlate*** **Image (Appendix)**
- ***Plant-Based!*** **Handout**
- ***Imagine a Pizza*** **Worksheet**
- ***Keep It Simple!*** **Handout**

Lesson Activities:

- Using the activity list and the ***Why Do I Eat?*** **(Chart or Circle)** Worksheet, discuss the reasons humans eat. Find information in 1A-D beginning at right.

Unit 1 Let's Eat!

Lesson 1 – Why Eat?

K-3rd Grades

Lesson 1: Why Eat?

Anticipatory Activity

A. Invite students to call out some of their favorite activities. Start a visible list.

B. Show students the ball and the plant-based food item.

C. Challenge students to describe how one relates to the other. The food gives us the strength and energy and ability to play with the ball. It keeps us healthy so we can play with the ball.

D. Explain that we need to eat healthy food in order to do all the things we put on our list.

E. Explain that we also need food to give us the strength and energy and ability to do other things as well: to learn, to clean our rooms, to help us get over a cold, to avoid getting seriously ill or even to just put on our socks.

F. Explain that food provides us with the things we need to help us grow and to help us heal if we hurt ourselves or are sick.

G. Distribute the *Let's Eat!* Rhyme.

H. Explain that the word nutrition is about eating food that helps us grow and keeps us healthy.

I. Read the *Let's Eat!* Rhyme together.

Lesson 1: Why Eat?

1. <u>Let's talk about food</u>

A. Referring to the activities listed at the opening of the lesson, recall that one reason why we eat is to have the energy to do things we want to do.

B. Distribute the *Why Do I Eat!* Chart Worksheet or the *Why Do I Eat!* Circle Worksheet.

C. Allow time for students to complete the worksheet. Talk about some of the activities they chose.

- Using the ***My Plate*** **Image**, discuss the traditional model of nutrition. Find information in 2A-B at right
- Using the ***Plant-Based*** **Handout,** introduce the plant-based approach to nutrition. Find information in 2C-I beginning at right.
- Using the **Plant-Based Handout,** identify healthy plant-based foods. Find information in 3A-D on page 10.
- Identify some plant-based foods that are not nutritious. Find information in 3E-G on page 10.

Curriculum Links

- Health
- Language Arts
- Physical Education
- Science

Educational Skills:

- Compare
- Discuss

Closure Activity:

Using the ***Imagine a Pizza*** **Worksheet,** apply plant-based nutrition to a common food. Find information on page 16.

Enrichment Activity:

- Using the ***Keep It Simple!*** **Handout,** discuss reactions to plant-based nutrition. Find information on page 16.

D. Point out that eating provides people with lots of benefits:

- Our bodies remain healthy and strong.
- We have energy to do things we have to do and things we want to do.
- We enjoy how food tastes.
- We feel happy when we eat certain foods.
- We often take time to talk with others while we are eating.

2. Different ways to eat

A. Using the *My Plate* Image, explain that it is an example of one approach to eating. Point to the various food groups illustrated in the image: fruits, grains, vegetables, protein and dairy.

B. Invite students to talk about what they ate for lunch (or for supper the previous day). As they mention a food, point out where it would fit on the plate. For example, a hamburger might include a meat from the protein group, a bun from the grains group, and pickles from the vegetable group.

C. Explain that the class will learn about another approach to eating that is called *Plant-Based Nutrition.*

D. Distribute the *Plant-Based Image.* Invite students to identify foods on the page.

E. Explain that with *Plant-Based Nutrition,* we choose from a wide variety of plant-based foods. On the other hand, the traditional approach we looked at on the My Plate Image often centers on protein foods like meat, poultry, fish and eggs, and dairy foods like milk.

F. Point to images on the *My Plate Image* that show meat, etc. and dairy foods.

G. Explain that none of those foods appear on the *Plant-Based* Image because the plant-based approach relies only on a wide variety of plant-based foods including vegetables, fruits, grains, beans and nuts.

H. Explain that both approaches can give us the benefits we want to get from eating: the nutrients, the energy, the flavor, the fun, etc.

I. Explain that one reason that people choose *Plant-Based Nutrition,* however, is that many health professionals see it as the healthier alternative, especially in fostering a healthy heart.

3. Let's see…

A. Ask students to name the foods they see on the *Plant-Based* Handout.

B. Explain that the image shows foods from different food families.

- Tubers and Root Vegetables (potatoes, carrots)
- Vegetables (lettuce, salad, pizza toppings)
- Whole Grains (breads, pizza crust)
- Fruits (apple, oranges, banana, raisins)
- Legumes

C. Explain that we already eat these foods. The difference is that, when we talk about eating a whole-food, plant-based diet, we are making these food families the center of our nutrition. We are no longer relying on animal products or processed food to provide our nutrients.

D. Ask students to name other examples of foods from each food family.

- Tubers and Starchy Vegetables – sweet potatoes, radishes
- Vegetables – broccoli, green beans
- Whole Grains – oatmeal, brown rice
- Fruits – strawberries
- Legumes/Beans – black beans

E. Challenge students to name some foods that would not be examples of plant-based nutrition even though they come or include from foods from plant families. (High fat foods like French fries, potato chips, doughnuts or high sugar foods like candy and soda)

F. Explain that eating these foods often can harm students in two ways:

- They contribute to the development of heart disease or other diseases.
- They fill you up so you are not hungry enough to eat the foods that are good for you.

G. Explain that the class will be focusing on good foods from the food families we just talked about.

Student Activities

Choose handouts from the menu below that fit the aptitude and abilities of your students. You can use these as a group exercise or assign as individual work.

These Handouts/Worksheets are available on the following pages:	Page
Let's Eat! Rhyme	12
Why Do I Eat? Chart Worksheet	13
Why Do I Eat? Circle Worksheet	14
My Plate Image for Display	Appendix
Plant-Based Worksheet	15
Imagine a Pizza! Worksheet	17
Keep It Simple Handout	18
Letter to Parents	Appendix

Let's Eat!

I eat because I love to play.
If I could, I'd play all day!

I eat to help me learn new things.
I love the energy good food brings!

I eat because I want to grow.
Sometimes that happens awfully slow!

I eat to stay well and strong
Those whole grains and beans really help me along

I eat because I love to eat!
Those veggies and fruits just can't be beat.

Why Do I Eat?

The chart below names some reasons why people eat.
For each reason listed, name or draw one or more examples from your own life.
(You will see an example in the first row.) Add some your own reasons to eat too.

Reason	Example	Example
Example: To have energy for activities I like to do	Play basketball	Play with my dog
To have energy for activities I like to do!		
To have energy for chores		
Because I like this food!		

Why Do I Eat?

Circle the activities you enjoy. Draw a square around activities you would like to try.

Plant-Based

Below are examples of plant-based foods we will talk about in this unit.

- Fruits
- Tubers and Root Vegetables
- Whole Grains
- Beans and Legumes
- Leafy Vegetables

Closure Activity:

Point out that food we prepare may include more than one food family. For example, you could make a pizza starting with a crust from the whole grain family. Then you could add a wide variety of plant-based toppings from the other plant-based families.

A. **Invite students to name plant-based items for pizza sauces and toppings.** (Pesto, fresh tomatoes or a sugar-free marinara sauce; artichokes, peppers, onions, mushrooms, spinach, left-over cooked vegetables, beans, parsley, cilantro, other herbs, etc for toppings)
B. **Ask what typical items you would not put on plant-based pizza.** (meats, poultry, fish, cheese)
C. **Using the *Imagine a Pizza!* Worksheet, invite students to work individually or in group to "prepare" a plant-based pizza.**
D. **Discuss their work.** Why did they choose the toppings they chose? Was it hard or easy to come up with ideas for toppings? If they worked with a partner or group, how did they resolve disagreements about what to put on the pizza?

Enrichment Activities:

A. **Distribute the *Keep It Simple!* Worksheet.**
B. **Review the worksheet content.**
C. **Discuss what students think about eating a plant-based diet.**
   - Would they see it as easy or challenging?
   - Are some students already eating a whole-food, plant-based diet?
   - Other than health benefits, what are some of the other benefits they experience?
   - What are some of the challenges?

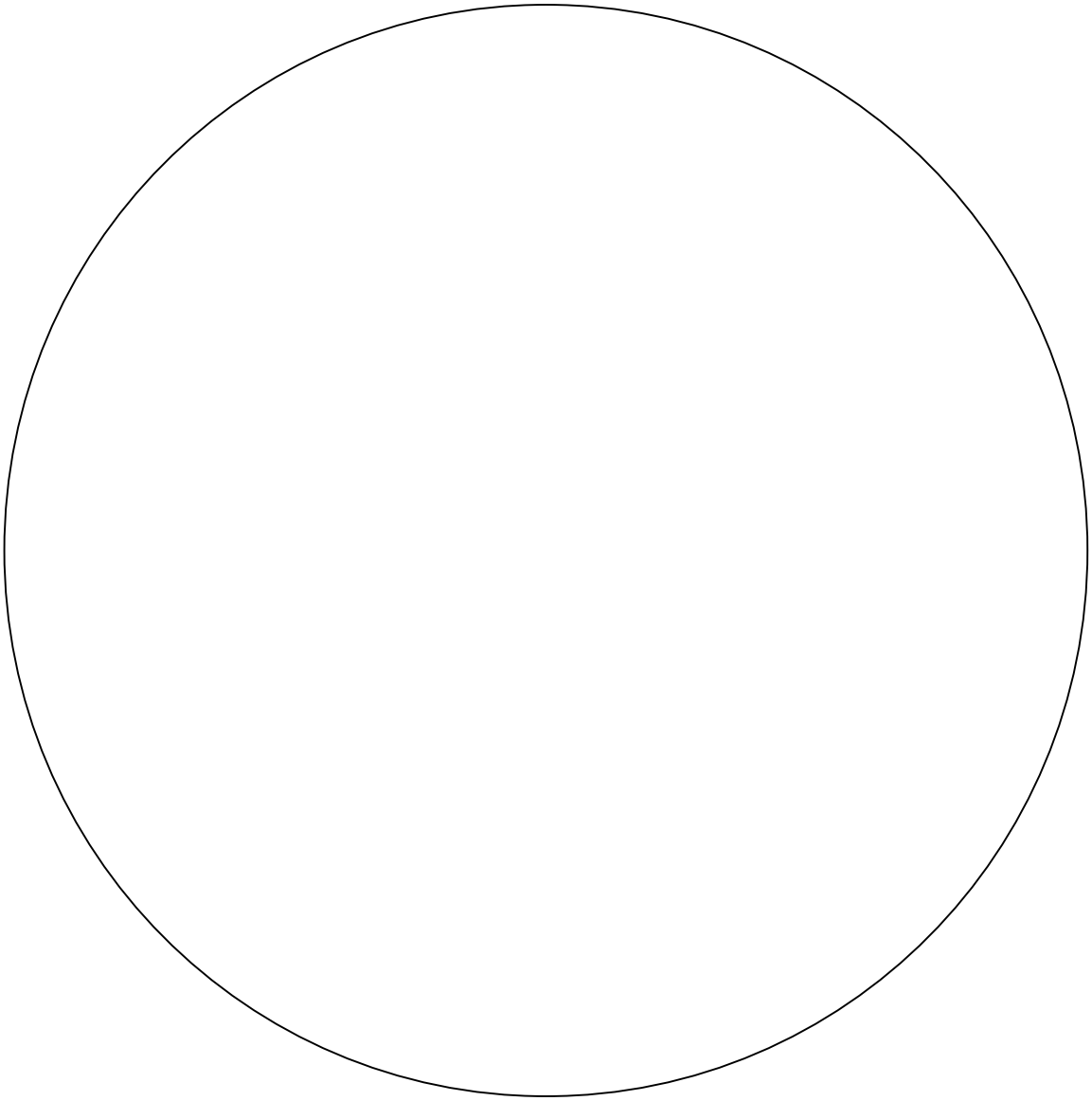
Encourage student to start an *Eat Well!* Portfolio in which to keep their plant-based nutrition work, including the worksheets and handouts they received in this lesson.

Optional: Assign or suggest an activity from the *Our Plant-Based Workshop* section. Activities related to material covered in this lesson include the following:

- ***Let's Go Shopping!***
- ***Name Your Favorite?***

Imagine a Pizza!

The circle below represents a whole-grain pizza crust. Create your own masterpiece pizza using only plant-based foods for sauces and toppings. Draw and label the items within the circle. Or use numbers and identify the items in a list on the bottom of the page.



Keep It Simple!

Plant-Based Nutrition advises us to eat a variety of plant-based foods in their natural form or in as close to their natural form as possible.

EAT!	AVOID!
Fruits	Added salt
Starchy and Root Vegetables	Added oil
Whole Grains	Added sugar
Beans and Legumes	Added salt
Seeds and Nuts	Added salt
Lots more vegetables	Added salt

Aim for…
80 % Carbohydrates
10 % Fat
10 % Protein

Sample Activity – Unit 4 – Lesson 1 – K-3rd Grad

Start the Day!

Work with your partner to create a different healthy breakfast menu in the space below on each of your worksheets. Choose foods, especially plant-based foods, that you enjoy eating. When you have created your menus, talk about which breakfast is likely to be healthier. What makes that meal healthier?

Suggested Breakfast Menu

Our Group's Healthiest Breakfast Menu

Why It's Healthy…

Investigate Hippocrates!

Throughout history, physicians have recommended eating a healthy diet rather than relying on medicine to sustain health. Hippocrates in ancient Greece was among the first to do so. Do some research about Hippocrates and his ideas about health and medicine. Learn about the culture and food habits in the time of Hippocrates. Use this ***Investigate!*** **Worksheet** to gather your thoughts, then create a report or display for your classmates.

Sample Activity from Unit 4 Lesson 1 Gr. 4 - 6

Groovin' Grain Scramble!

Unscramble the words in the sentences below:

1. _____(hloew) _____(argnsi) contain the entire grain kernel including the bran, germ, and endosperm.
2. Eating whole grain foods is _____ (doog) for your heart and overall health.
3. Grains come from_____(asgrs) plants
4. The _____(mger) is the embryo or sprouting section of the grain seed.
5. The _____(rbna) is the outer shell of a grain that protects the grain seed.
6. A _____(nagri) is the edible seed or seed-like fruit of grasses that are cereals.
7. The_____ (doesmernp) is the inside of a grain under the bran that provides energy in the form of carbohydrates and protein
8. _____ (rbdea) is a baked food made of flour or meal.
9. A cereal grain that can be ground into a fine white flour used mostly in breads, baked goods (as cakes and crackers), and pasta as (as macaroni or spaghetti): _____(thwea)
10. A grain that pops: _____(ocnr)
11. A whole grain that we cook for breakfast:_____(tmaloea)
12. _____(ecir) is a seed that comes from a grass grown in wet climates.
13. A _____ (tpaesl) _____ (dofo) is a food that is easy and inexpensive to grow and is eaten by a lot of people.

Growing Concerns…

We discussed several concerns people are raising relative to how food is grown in the United States and around the world. Three examples are below.

1) In a **Concentrated Animal Feeding Operation (CAFO)**, animals are raised in very crowded conditions and given hormones to promote faster growth and antibiotics to deal with diseases. Hormone and antibiotic residue can end up in our food and, through the animals' excrement, end up in soil and runoff into drinking water.

2) **Genetically Modified Seed (GMO), also known as Genetically Engineered seed (GE)**, has been developed to resist certain herbicides. Growers are able to use spray to kill weeds and insects without killing the crop. Over time, as weeds and insects adapt, more and more chemicals are needed, leaving more and more residue on the food and in the soil. Excessive spraying may also be damaging the ecosystem, decreasing populations of bees and bats, for example, which may ultimately result in the need for even more chemical spraying.

3) **Excessive tilling** is creating situations in which the land is no longer usable for food production and decreasing biodiversity.

Choose one of the above. Conduct research to find out more about the issue in your state, the nation and around the globe. Create a report, poster, video or some other way to communicate effectively about the issue.

Sample Activity – Plant-Based Workshop – Gr. 4 - 6

Bring your favorite plant-based foods to life! Create a cast of characters, including at least one character from each of the food families we learned about: fruits; tubers and root vegetables; grains, beans and legumes; nuts and seeds; and leafy green, cruciferous and other vegetables. Write a script that gives each character a chance to brag about its benefits. Consider adding scenes that highlight nutrient "characters" or focus on the benefits and challenges of choosing plant-based nutrition. Practice and perform your play before a live audience. Consider making a video as well.

Lunch Bunch!

Talk with the people who prepare school lunches. How do they decide which foods to serve? What fresh foods do they prepare and serve? What packaged foods do they prepare and serve? Would they like to see any changes in the school lunch program?

Record what you learn below. How well does your school lunch program provide for students who choose plant-based nutrition? Add your own suggestions for changes you would like to see in your school lunch program.

Question	Response
Who decides which foods to serve?	
What packaged foods are served?	
What fresh foods are served?	

My Suggestions…

OPTIONAL: Compare your suggestions with those of your classmates. Prepare a list. Include reasons for making those suggestions. Present your suggestions to the person or group who makes decisions about school lunches in your district.