



HARVESTING LESSON

9th THROUGH 12th GRADES

KEY

In this lesson, students will harvest from the Learning Garden.

UNDERSTANDINGS

- Safe harvesting and food handling practices should be used.
- Plants from our Learning Garden have different nutritional properties.
- Getting a variety of nutrients from fruits and vegetables keeps me healthy.

STANDARDS

ALIGNMENT

Common Core – English Language Arts

- SL.9-10.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
- SL.9.10.6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.
- SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
- SL.11-12.6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

MATERIALS &

PREPARATION

- Review harvesting documents (see Teacher Background)
- Prepare for harvest and collect harvesting supplies
- Print Nutrient Design Challenge handout, one per group
- Online access to: www.fruitsandveggiesmorematters.org/fruit-vegetable-nutrition-database (or preprint information for harvestable Learning Garden crops)
- Review lesson and familiarize yourself with your Learning Garden
- Optional: supplies for additional Learning Garden activities

TEACHER

BACKGROUND

Review your school district's safe handling guidelines and ask your Garden Educator for more information. Review Harvesting documents which include:

- Harvest Basics (A Plant-Centric Harvest Guide)
- Planning Your Learning Garden Harvest



- Five Steps to Food-Safe School Gardening
- Creating Your Harvest Kit

These resources can be found online at biggreen.org/teaching-in-your-garden/garden-skills-lessons/harvesting-your-learning-garden/.

Connect this lesson to nutrition and health. Students ages 14-18 need on average 1.5 cups of fruit (www.choosemyplate.gov/fruit) and 3 cups of vegetables (www.choosemyplate.gov/vegetables) every day.

The following site offers more information about specific crops: www.fruitsandveggiesmorematters.org/fruit-vegetable-nutrition-database.

Most vegetables are naturally low in fat and calories. None have cholesterol. (Sauces or seasonings may add fat, calories, and/or cholesterol.) Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, and vitamin C.

Most fruits are naturally low in fat, sodium and calories. None have cholesterol. Fruits are sources of many essential nutrients that are under-consumed, including potassium, dietary fiber, vitamin C, and folate (folic acid).

- Diets rich in potassium may help to maintain healthy blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, spinach, lentils, and kidney beans. Fruit sources of potassium include bananas, prunes and prune juice, dried peaches and apricots, cantaloupe, honeydew melon, and orange juice.
- Dietary fiber from fruits and vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower the risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods help provide a feeling of fullness with fewer calories.
- Folate (folic acid) helps the body form red blood cells. Women of childbearing age who may become pregnant should consume adequate folate from foods, and in addition 400 mcg of synthetic folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.
- Vitamin A keeps eyes and skin healthy and helps to protect against infections.
- Vitamin C helps heal cuts and wounds and keeps teeth and



INTRODUCTION

gums healthy. It also aids in iron absorption.

Spend time discussing the following introductory questions:

- Do plants have nutritional value? Do plants come with a nutrition label?
- How many fruits and vegetables should we be eating every day?
- Why is it important to eat fruits and vegetables?

LESSON

Welcome your students to the Learning Garden, and line students up along one side. Stand on the opposite side of the Learning Garden so you can address the entire group.

Ask students if they know what they will be doing in the Learning Garden for today's lesson. Let them know they will be practicing their harvesting skills.

1. Ask students if they know what is currently growing in the Learning Garden.
2. Introduce the crop(s) to be harvested and review the plant part(s) that will be eaten. Review with students how we know this vegetable is ready to harvest and choose the appropriate harvest method: student harvest or teacher harvest.
3. *If every student has the opportunity to harvest:* Demonstrate how to harvest the crop safely, focusing on exactly what part of the plant to harvest, how to harvest it, and ways you could harvest incorrectly. Review the steps and ask students if they have any questions. Instruct students to place their crop in a harvest container for that specific crop.

If not every student has the opportunity to harvest: Harvest within sight of all students, and place harvested crops into a harvest container for that specific crop.

4. After you have finished harvesting with your students, return inside with your produce. Weigh and track your harvest. Store crops appropriately.
5. Let your students know that they will now be completing a Nutrient Design Challenge in groups. Divide students into groups and distribute the Nutrient Design Challenge worksheet. Review with students.
6. Students will be using the following website:
www.fruitsandveggiesmorematters.org/fruit-vegetable-nutrition-database to complete the background information section of their worksheet.
7. After students have finished the background information,



students should transition to creating their group's school lunch – one that is not only nutrient dense but also something they would like to eat!

8. Give students 15-20 minutes to complete the assignment.
9. Have students prepare a short peer-to-peer or classroom presentation that details the nutritional benefits of their crop.
10. Consider creative ways your students can display their work.

CONCLUSION

Have students share key parts of the day's lesson and review the Key Understandings.

Students should clean up the Learning Garden as needed.

ADDITIONAL LEARNING GARDEN ACTIVITIES

Extend your Learning Garden experience, and have your students participate in any of the following Learning Garden activities, as appropriate:

- A tasting activity is a great follow up activity to the harvesting lesson. Choose a recipe for your class that is simple and requires little to no cooking, like a salad or a sandwich!
- Other follow up activities may include: planting, watering and weeding.





Name(s):

Date:

NUTRIENT DESIGN CHALLENGE

BACKGROUND INFORMATION: Eating fruits and vegetables provides health benefits – people who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Fruits and vegetables provide nutrients vital for health and maintenance of your body.

Nutrient	Health Benefits	Fruit & Vegetable Sources
Potassium	<ul style="list-style-type: none">• helps to maintain healthy blood pressure	
Fiber	<ul style="list-style-type: none">• reduces blood cholesterol levels and may lower risk of heart disease• improves bowel function and helps reduce constipation• provides a feeling of fullness with fewer calories	
Folate (folic acid)	<ul style="list-style-type: none">• helps the body form red blood cells	
Vitamin A	<ul style="list-style-type: none">• keeps eyes and skin healthy• helps to protect against infections	
Vitamin C	<ul style="list-style-type: none">• helps heal cuts and wounds• keeps teeth and gums healthy• aids in iron absorption	



Name(s):

Date:

NUTRIENT DESIGN CHALLENGE

DESIGN CHALLENGE: Your team will design a school lunch that features all five nutrients you research on the reverse page. Your school lunch will also need to be a lunch that you and your team would be excited to eat!

Use the space below to brainstorm and detail your school lunch.