



## Leader's Guide

# Garden to Plate: Food Safety for School and Community Gardens

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### Introduction

Kids and families who grow their own produce are more likely to eat the fruits (and vegetables) of their labor.

Because gardening is an effective strategy for healthier food consumption, the number of school and community gardens is increasing across the state of Missouri. However, fresh produce has also been linked to outbreaks of foodborne illness.

Fruits and vegetables can be contaminated any time from planting to eating. Most pathogens are killed by cooking, but they are very difficult to wash off produce that will be eaten raw. To minimize contamination risks, this lesson outlines good practices for growing produce that school and community volunteers can take to keep their produce safe.



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These prevention strategies include:

- site and soil selection,
- personal hygiene,
- sanitation and tool safety,
- water and irrigation,
- compost and fertilizers,
- pest and animal management, and
- food safety in harvest and storing produce.

## Objectives

Participants will learn the importance of good practices for keeping produce safe from garden to plate.

- How to select and maintain safe soil.
- How to practice personal hygiene in regards to gardening.
- How to select and maintain safe water.
- How to practice food safety procedures in harvest and post-harvest.

## Intended Audience

- Missourians
- School and community garden volunteers
- Educators and teachers

## Before the Lesson

1. Review this leader's guide and the fact sheet (N1314), including the websites referenced.
2. Preview suggested videos in the fact sheet.
3. Nutrition and Health Specialists should visit with a horticulture specialist/educator. Consider team teaching with a horticulture specialist/educator or Master Gardener.
4. Visit a community/school garden site and interview community/school garden volunteers.
5. Take pictures of local gardens to show various sites and garden designs during programs.

## Preparing for the Lesson

### Before the lesson:

- Make copies of fact sheet and evaluations.
- Make copies of any optional supporting information.
- Select websites and videos to show.
- Gather potential lesson props:
  - Basket of fresh fruits and vegetables
  - Non-scented chlorine bleach
  - Disposable gloves
  - Food grade and non-food grade containers
  - Vegetable brush
  - Refrigerator thermometer
  - Examples of suitable materials for composting/sample of compost
  - Compost thermometer
  - Fruit and vegetable recipe samples

## Presentation

1. Provide pens or pencils.
2. Provide contact information
3. Have participants introduce themselves and tell why they are attending.
4. Review and discuss each section:
  - Site and Soil Selection
  - Personal Hygiene
  - Sanitation and Tool Safety
  - Water and Irrigation
  - Compost and Fertilizers
  - Pest and Animal Management
  - Food Safety in Harvesting and Storing Produce
5. Distribute evaluations.
6. Answer questions.
7. Thank audience for attendance and adjourn.

## Resources

For more information, visit these online resources:

### Websites

University of Missouri Extension Food Safety  
[extension.missouri.edu/programs/food-safety](http://extension.missouri.edu/programs/food-safety)

K-State Research and Extension Produce Safety  
[ksre.k-state.edu/foodsafety/produce/index.html](http://ksre.k-state.edu/foodsafety/produce/index.html)

Food Safety Diseases  
[cdc.gov/foodsafety/diseases/index.html](http://cdc.gov/foodsafety/diseases/index.html)

MU Extension Food Systems website, including gardening information  
[extension.missouri.edu/foodsystems/home.aspx](http://extension.missouri.edu/foodsystems/home.aspx)

Water quality Information  
[ephtn.dhss.mo.gov/EPHTN\\_Data\\_Portal/waterquality/index.php](http://ephtn.dhss.mo.gov/EPHTN_Data_Portal/waterquality/index.php)

Healthier Missouri Communities—Community Gardens  
[extension.missouri.edu/healthiermo/communitygardens.aspx?\\_ga=2.45872548.1215397199.1566240247-1525874109.1544807833](http://extension.missouri.edu/healthiermo/communitygardens.aspx?_ga=2.45872548.1215397199.1566240247-1525874109.1544807833)

### Videos

Composting:  
[kansashealthyyards.org/component/allvideoshare/video/composting-making-black-gold?Itemid=101](http://kansashealthyyards.org/component/allvideoshare/video/composting-making-black-gold?Itemid=101)

How to Test Your Soil for Nutrients  
[kansashealthyyards.org/component/allvideoshare/video/how-to-test-your-soil-for-nutrients?Itemid=101](http://kansashealthyyards.org/component/allvideoshare/video/how-to-test-your-soil-for-nutrients?Itemid=101)

Kansas Community Gardens, Video Series  
[kansashealthyyards.org/all-videos/search?q=Community%20Gardens](http://kansashealthyyards.org/all-videos/search?q=Community%20Gardens)

Why Start One?  
[youtube.com/watch?v=quMVVPYIJRg](http://youtube.com/watch?v=quMVVPYIJRg)

Choosing a Site  
[kansashealthyyards.org/all-videos/video/community-gardens-choosing-a-site](http://kansashealthyyards.org/all-videos/video/community-gardens-choosing-a-site)

Common Features  
[kansashealthyyards.org/all-videos/video/community-gardens-common-features](http://kansashealthyyards.org/all-videos/video/community-gardens-common-features)

Different Types  
[kansashealthyyards.org/all-videos/video/community-gardens-different-types](http://kansashealthyyards.org/all-videos/video/community-gardens-different-types)

Planning Ahead  
[kansashealthyyards.org/all-videos/video/community-gardens-planning-ahead](http://kansashealthyyards.org/all-videos/video/community-gardens-planning-ahead)

Preparing the Site  
[kansashealthyyards.org/all-videos/video/community-gardens-preparing-the-site](http://kansashealthyyards.org/all-videos/video/community-gardens-preparing-the-site)

Typical Costs  
[kansashealthyyards.org/all-videos/video/typical-costs](http://kansashealthyyards.org/all-videos/video/typical-costs)

Funding  
[kansashealthyyards.org/all-videos/video/community-gardens-sources-of-funding](http://kansashealthyyards.org/all-videos/video/community-gardens-sources-of-funding)

Getting Gardeners Involved  
[kansashealthyyards.org/all-videos/video/community-gardens-getting-gardeners-involved](http://kansashealthyyards.org/all-videos/video/community-gardens-getting-gardeners-involved)

Becoming a Community  
[kansashealthyyards.org/all-videos/video/becoming-a-community](http://kansashealthyyards.org/all-videos/video/becoming-a-community)

### Publications

Disease Prevention in Home Vegetable Gardens. University of Missouri Extension.  
[extension.missouri.edu/g6202](http://extension.missouri.edu/g6202)

Food Facts, Raw Produce: Selecting and Serving it Safely. U.S. Food and Drug Administration.  
[fda.gov/media/77178/download](http://fda.gov/media/77178/download)

Food Safety for School and Community Gardens. North Carolina State University and North Carolina Cooperative Extension.  
[growingsafergardens.files.wordpress.com/2012/10/foodsafetywebcurriculum-10-24-12.pdf](http://growingsafergardens.files.wordpress.com/2012/10/foodsafetywebcurriculum-10-24-12.pdf)

Food Safety Tips for School Gardens. USDA Food and Nutrition Service.  
[fns-prod.azureedge.net/sites/default/files/foodsafety\\_schoolgardens.pdf](http://fns-prod.azureedge.net/sites/default/files/foodsafety_schoolgardens.pdf)

Grow It Eat It. University of Maryland Cooperative Extension.  
[chapmanfoodsafety.files.wordpress.com/2011/08/foodsafety.pdf](http://chapmanfoodsafety.files.wordpress.com/2011/08/foodsafety.pdf)

Home Gardening Food Safety: Washing the Fruits (and Vegetables) of Your Labor Properly. University of Florida Extension.  
[sfyl.ifas.ufl.edu/archive/hot\\_topics/families\\_and\\_consumers/washing\\_fruits\\_and\\_vegetables.shtml](http://sfyl.ifas.ufl.edu/archive/hot_topics/families_and_consumers/washing_fruits_and_vegetables.shtml)

Missouri Vegetable Planting Calendar. University of Missouri Extension.  
[extension.missouri.edu/g6201](http://extension.missouri.edu/g6201)

Community Gardening Toolkit. University of Missouri Extension.  
[extension.missouri.edu/mp906](http://extension.missouri.edu/mp906)

## Evaluation

### Knowledge of Food Safety for School and Community Gardens

Disagree completely—1, Disagree somewhat—2, Neutral—3, Agree somewhat—4, Agree completely—5

Before Presentation:	1	2	3	4	5
I know how to handle produce in the garden safely.					
I know how to select safe garden sites and soil.					
I know how to keep my garden area and tools safe and sanitized.					
I know how to identify safe water sources for my garden.					
I know how to keep a safe compost pile.					

After Presentation:	1	2	3	4	5
I know how to handle produce in the garden safely.					
I know how to select safe garden sites and soil.					
I know how to keep my garden area and tools safe and sanitized.					
I know how to identify safe water sources for my garden.					
I know how to keep a safe compost pile.					

### Comments and Suggestions:

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## Revised by

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