

# SNAP-Ed Toolkit

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## Growing Healthy Kids: Garden-Enhanced Nutrition Curriculum

Oregon State University Extension Service

### Overview

Growing Healthy Kids (GHK) is a garden-themed, direct education curriculum aimed to integrate nutrition education with gardening to promote healthy eating and healthy choices among children, best aligned for students in 2nd and 3rd grade. GHK teaches nutrition education concepts closely aligned with MyPlate messages suitable for a SNAP-Ed audience and includes seven lessons with options for an outdoor, indoor, or hybrid (combination of activities from both mural and indoor gardens) garden, giving students opportunities to learn basic plant parts and try a variety of fruits and vegetables. Along with core journaling and gardening activities, lessons include food tasting activities, recipe printouts, physical activity options, coloring sheets, and suggestions for supplemental storybooks to go with lesson themes. Many connections to the Food Hero social marketing campaign exist within the curriculum. **Target Behavior:** Healthy Eating **Intervention Type:** Direct Education

### Intervention Reach and Adoption

Although children are the primary audience for GHK, it is important to remember that they take many curricular materials home and that family members are thus an important secondary audience. GHK was designed to be used as a classroom, school-based intervention, ideally with access to an outdoor garden. Nonetheless, some partners used an outdoor space while others opted to do the indoor or mural based gardening option. **Setting:** Schools, School garden **Target Audience:** Elementary School **Race/Ethnicity:** All

### Intervention Components

GHK targets elementary aged children and aims towards three primary objectives: (a) children will increase their exposure to vegetables and fruits by tending a garden, (b) children will increase their consumption of vegetables and fruits, and (c) children will model healthy eating and physical activity choices.

GHK components are intended to increase exposure to and consumption of fruits and vegetables through knowledge, attitude, and behavior changes. Although many of the activities in this curriculum are ideally taught in an outdoor garden, GHK has 3 gardening options for each lesson: outdoor, indoor, mural. Though GHK was designed with a growing calendar in mind – 7 lessons over 7 weeks to go from seed to harvest – it could potentially be condensed, especially if using the mural option. Food tasting, regardless of length of series or garden option (outdoor or indoor), is considered an essential component.

## Intervention Materials

The GHK curriculum consists of a series of 7 lessons, divided into 3 sections: Overview, Lesson Plans, and Appendices (A-W). All intervention materials are available for download on the website here: <https://foodhero.org/growing-healthy-kids-full-curriculum>. At this site, a link can also be found to access GHK Virtual Toolkit and videos that correspond to each lesson. The GHK curriculum may be used free of charge, provided Oregon State University Extension Service is credited appropriately. Educator training for GHK is self-directed using materials available here: <https://foodhero.org/growing-healthy-kids-full-curriculum>. There are also several appendices that offer training for educators on various components of the program, including handwashing instructions, an educator's guide to vegetable gardening, growing in containers, and instructions for constructing a PVC light rack.

## Intervention Costs

The intervention materials are available at no cost.

## Evidence Summary

GHK was created by Nutrition and Home Horticulture Extension faculty at OSU, including SNAP-Ed; Extension Family & Community Health; 4-H Youth Development; and OSU Master Gardener program. Team members together developed lesson concepts, wrote, and reviewed. Several Oregon school partners participated in pilot testing and formative research for GHK: a subset of activities was piloted in 2 Oregon counties in 2008, and a formative evaluation of GHK was done in 12 counties in 2009-2012. An outcome evaluation of GHK used a quasi-experimental, pre- and post-test design to compare GHK curriculum delivery with a series of food-tasting-only nutrition education lessons. The evaluation found that students who received GHK curriculum exhibited significantly larger gains than the comparison group students on two important outcomes: the number of vegetables and fruits eaten, and their reported preference for a range of garden vegetables. As a result of participating in the GHK program, children ate a greater number of different foods (consisting of fruits and vegetables) and expressed a higher level of preference for a variety of vegetables. Process evaluation results, including from student journal samples, parent survey comments, and student surveys, support the use of GHK as a novel approach for teaching nutrition education concepts. Students, parents, classroom teachers, and educators all shared enthusiasm for this hands-on gardening approach. **Evidence-based Approach:** Practice-Tested

## Evaluation Indicators

Based on the SNAP-Ed Evaluation Framework, the following outcome indicators can be used to evaluate intervention progress and success.

	<b>Readiness and Capacity – Short Term (ST)</b>	<b>Changes – Medium Term (MT)</b>	<b>Effectiveness and Maintenance – Long Term (LT)</b>	<b>Population Results (R)</b>
Individual	<a href="#"><u>ST1</u></a>	<a href="#"><u>MT1</u></a> , <a href="#"><u>MT2</u></a>		
Environmental Settings				
Sectors of Influence				

- ST1: Positive preference for trying new vegetables
- MT1: Child’s mean score for “liking” 10 different vegetables
- MT1: Total number of fruits and vegetables that the child has eaten
- MT2: Having fruits and vegetables to eat at home

## Evaluation Materials

Current evaluation materials include: (1) Pre and post youth survey tool – developed by Oregon State University. (2) Educator Lesson Reflection Questionnaire, (3) GHK Student “My Garden Journal” ([https://foodhero.org/sites/foodhero-prod/files/activity-sheets/GHK21\\_ENG%20Garden%20Journal.pdf](https://foodhero.org/sites/foodhero-prod/files/activity-sheets/GHK21_ENG%20Garden%20Journal.pdf)), and (4) Parent Survey. As part of the process evaluation SNAP-Ed nutrition educators completed lesson reflection surveys for each of the GHK lessons, providing comments and lesson ratings about the structure and design of the curriculum. Example Lesson Reflection Questionnaire can be found here: [https://oregonstate.qualtrics.com/jfe/form/SV\\_25IaOJ1vhvVryG9](https://oregonstate.qualtrics.com/jfe/form/SV_25IaOJ1vhvVryG9)

## Additional Information

**Website:** The GHK website, <https://foodhero.org/growing-healthy-kids-full-curriculum>, contains the free implementation materials described above along with further information. Additionally, Oregon’s Food Hero social marketing campaign is embedded within GHK through use of Food Hero recipes in each lesson, and availability of other complementary garden-based resources can be found on the Food Hero website: <https://foodhero.org/garden-tips>. **Contact Person(s):** Christine Mouzong and Lauren Tobey Email: [food.hero@oregonstate.edu](mailto:food.hero@oregonstate.edu) Phone: 541-737-1017