

## Research Design & Methods:

This study is a randomized controlled trial examining effects of school gardens on fruit and vegetable (FV) consumption and other outcomes among children in grades 2-6. Schools were randomly assigned to either the intervention group (gardens start in Spring 2012) or the waitlist control group (gardens start in late Spring 2013). The project's first year of data collection has involved 2nd, 4th and 5th grade classes; Year 2 will follow the same cohort as they enter into the 3rd, 5th and 6th grades. Data are collected from all schools (intervention and control).

Name \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_

**What Foods Did You Eat?**

Instructions: We would like to know how much of each fruit and vegetable (FV) listed below you ate in the last week at home. The FV can be fresh, frozen, canned or dried. Check the column that best describes how often you had each item. For instance, if you had an orange twice in the last week, you would check "1-3 servings each week".

→ A serving of **fruits** is equal to: 1 medium piece of fresh fruit, ½ cup of fruit salad, ¼ cup of raisins or other dried fruit

→ A serving of **vegetables** is equal to: 1 medium carrot or other fresh vegetable, 1 small bowl of green salad, ½ cup of fresh or cooked vegetables, ¼ cup of vegetable soup

Fruit					
	None	1-3 servings last week	4-6 servings last week	7 servings last week	8 or more servings last week
 Apple	<input type="checkbox"/>				
 Banana	<input type="checkbox"/>				
 Cantaloupe	<input type="checkbox"/>				
 Grapes	<input type="checkbox"/>				
 Oranges	<input type="checkbox"/>				
 Pear	<input type="checkbox"/>				
 Plums	<input type="checkbox"/>				
 Kiwi	<input type="checkbox"/>				
 Strawberry	<input type="checkbox"/>				

Based on Baranowski (2003) BS-FJV-A Page 1 of 4

## Research Questions:

The research is designed to address whether each of the following occur as a result of involvement with the garden:

- R1 – Did students consume more FV at school?
- R2 – Did students consume more FV at home?
- R3 – Did students' preference for FV increase?
- R4 – Do students show improvement in educational outcomes?

## Constructs and Measures (Administered by Extension Educators at school)

- **FV consumption:** At each data collection period, 3 days of photographs are taken of children's lunch trays before and after they eat. These are later analyzed for FV consumption.
- **FV availability at home:** Children complete a questionnaire which lists 39 FV and asks whether each was "in your home in the last week?" (Baranowski et al., 2003a).
- **FV preference:** Children complete a questionnaire indicating how much they like (3 point scale) each of 39 FV (Baranowski, 2003b).
- **FV taste:** Children respond, "I have tasted this," or "I have never tasted this" to determine what FV they have tasted.
- **Nutritional knowledge:** Informed by the curriculum, children answer 7 multiple-choice questions about plant parts and nutrients.
- **STEM skills:** Children answer 15 questions about their science and math abilities (adapted from Iowa 4-H Program).
- **FV consumption (at home):** A Food Frequency Questionnaire is sent home for parents to fill out with the child (Baranowski, 2003c).

Dr. Nancy M. Wells, Dept. of Design and Environmental Analysis, Cornell University is leading this study to examine the effects of school gardens on the students' fruit and vegetables consumption, and other educational outcomes.

"Healthy Gardens, Healthy Youth"  
People's Garden School Pilot Project



The Extension Partnership including:  
Washington State University Extension  
Cornell University Cooperative Extension  
Iowa State University Extension  
and Outreach  
University of Arkansas Extension