



# From Classroom to Cafeteria: nutrition education in the classroom impacting student food choices in the cafeteria and at home



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**Roseville**  
CITY SCHOOL DISTRICT



Alliance  
for a  
**Healthier  
Generation**



CSNA's 61st Annual Conference  
November xx, 2013  
Palm Springs, CA





# Overview

- Discover why CSNA and others support nutrition education in schools
- Investigate nutrition education and its influence on student consumption
- Explore the comprehensive nutrition education model
- Learn what teachers are saying about the classroom to cafeteria connection



# What does nutrition education look like to you?

Introduce yourself to the person next to you and share your answer.



# HHKFA 2010: LSWP Implementation

- LEA shall establish a LSWP for all schools
- Include goals for nutrition promotion and **education**, physical activity, and other school-based activities that promote student wellness.



# CSNA Legislative Position on Nutrition Education

- Sequential, standards based nutrition education be incorporated into pre-k through 12<sup>th</sup> grade curricula in order to:
  - Provide a foundation of life long good nutrition practices
  - Equip students to make nutritious choices
  - Maximize utilization of the school based child nutrition programs

# Supporting Nutrition Education

- School Nutrition programs support nutrition education
  - Offering nutritious foods in the cafeteria
  - Healthy messaging in cafeterias





# Healthy Messages in the Community

















# Natomas Unified School District Food Service Department

Making Healthy Choices For You Everyday

Make Half Your Plate

**Fruits & Vegetables**



**FREE SUMMER MEALS for  
CHILDREN 18 & UNDER  
MAY 28 - AUG 9**

- American Lakes
- Natomas High School
- Natomas Middle School
- Jefferson Elementary
- Bannon Creek

TRANSIT connect

HOBLOT  
CA EXEMPT  
1366989  
COLUSA

Ford

POWERSTROKE  
F250



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# Schools Role in Obesity Prevention: California Results

Survey by Field Research Corporation on behalf of Kaiser Permanente

89%

adults favor the  
new USDA  
school nutrition  
standards

90%

parents feel  
nutrition  
education is  
highly important

78%

adults endorse  
extending new  
standards  
beyond  
mealtime

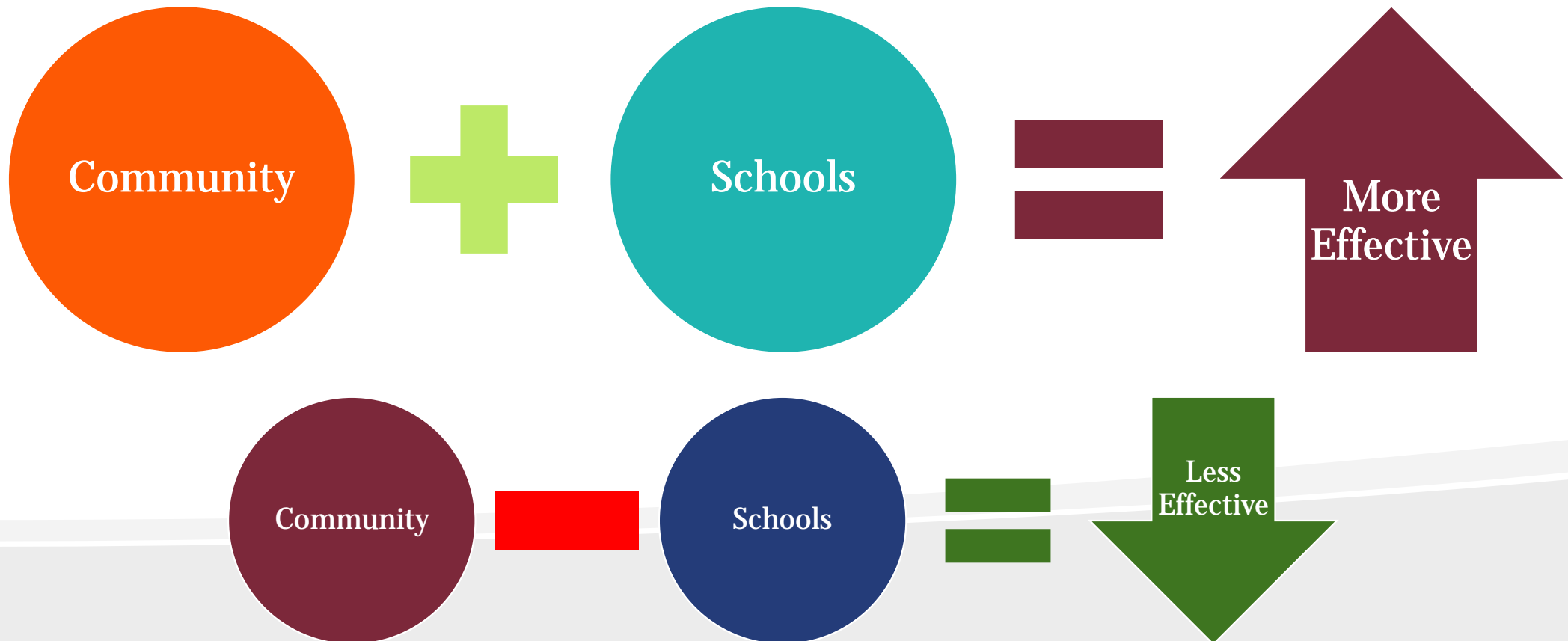


9 out of 10 parents say K-12 schools  
should play a role in reducing obesity  
in their community



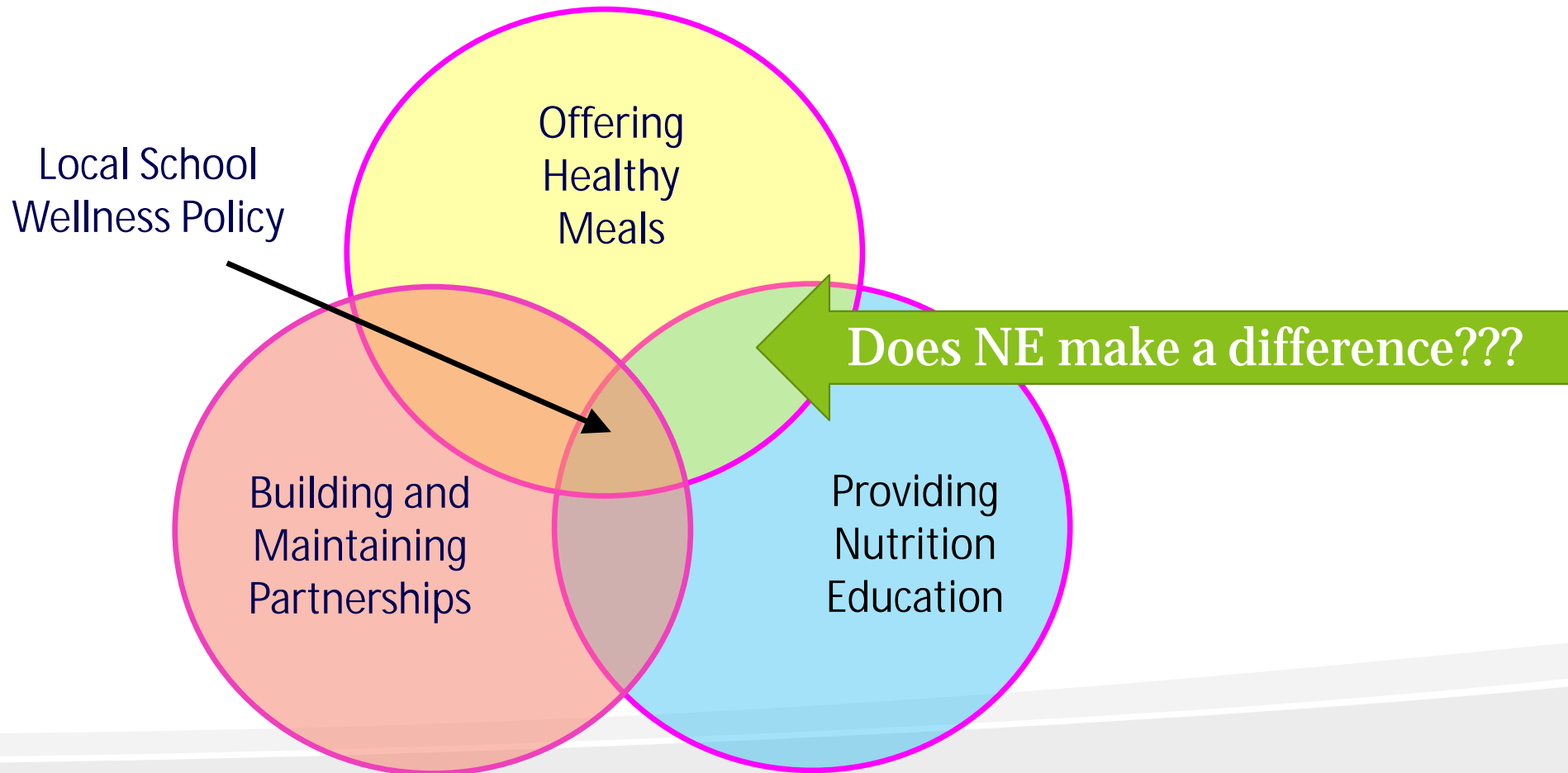
# Systematic Review of Community-Based Childhood Obesity Prevention Studies

- American Academy of Pediatrics
- Published July 12, 2013





# SHAPE Model





# The Institute of Medicine Planning Committee for National Nutrition Education Curriculum Standards 2-day public workshop on March 11-12, 2013

- Sponsored by the USDA Food and Nutrition Service
- Featured invited experts presentations and panel discussions
- Explored the merits and potential uses of a set of national nutrition education curriculum standards and learning objectives
- Identify current and promising practices
- Consider the most important attributes of standards
- Suggest approaches to build acceptance and use among educators
- <http://www.iom.edu/Activities/Nutrition/NutritionEducationStandards/2013-MAR-11.aspx>



# Nutrition Education Defined

“Any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition related behaviors conducive to health and well-being and delivered through multiple venues.”

Contento, Nutrition Education: Linking Research, Theory, and Practice, 2<sup>nd</sup> ed. 2010, p14



# Goal: Nutrition Education moves from Intervention to Institutionalization



Intervention to Institutionalization

# Effective Nutrition Education Program in K-12 Schools

Nutrition  
Promotion

- Posters
- Bulletin Boards
- Newsletters
- Marketing

Food

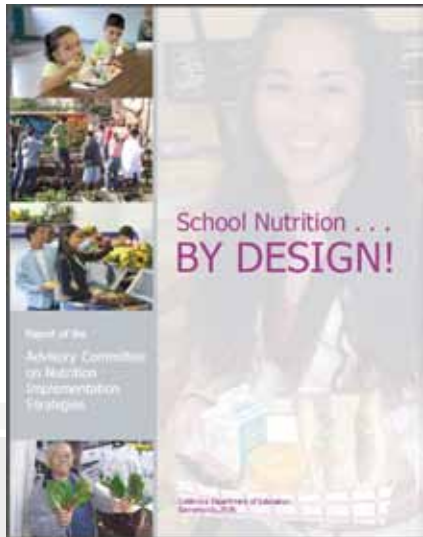
- Taste Testing
- Planning
- Purchasing
- Cooking
- Food Safety

Literacy

Classroom  
Nutrition Education

- USDA Dietary Guidelines for Americans
- Based on health education standards
- Part of a comprehensive education
- Integrate with other subjects
- Focus on behavior change
- Engages family and community
- Incorporates the physical environment

Common Core  
State Standards



# Effective Comprehensive Nutrition

## Education Programs in K-12 Schools

### Nutrition Promotion



High Impulse



High Visual Influence



Low Decision Making



Low Knowledge

### Classroom Nutrition Education



Low Impulse



Low Visual Influence



High Decision Making



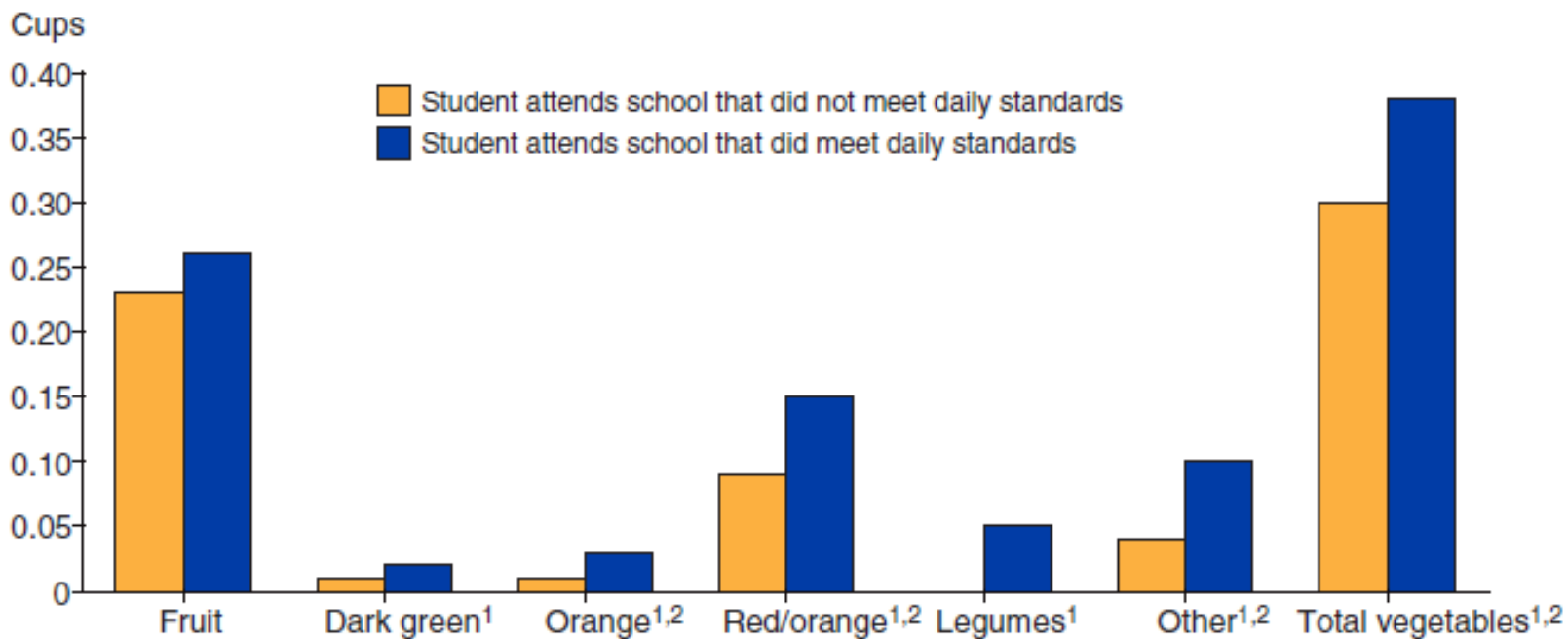
High Knowledge



# USDA ERS: Fruit and Vegetable Consumption by School Lunch Participants, 8/2013

Figure 1

## Average cups consumed at lunch by all students

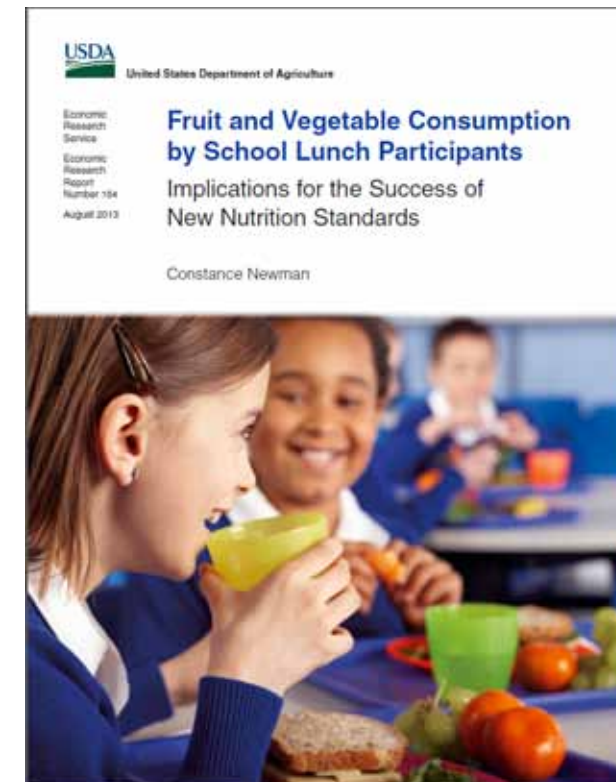


Note: The chart shows the average cups of fruit and vegetables by type separated by whether the school the students attended met the standards for those foods. The "orange" category shows schools that met or did not meet the 2011 proposed standard for orange vegetables, and the "red/orange" category shows schools the met or did not meet the final 2012 standard that combines red and orange vegetables together.

<sup>1</sup>Indicates significant difference in the means ( $p < 0.05$ ).

<sup>2</sup>Indicates significance when included with other independent variables in a Tobit model of consumption.

Source: ERS calculations using the data from the School Nutrition and Dietary Assessment III (SNDA III).

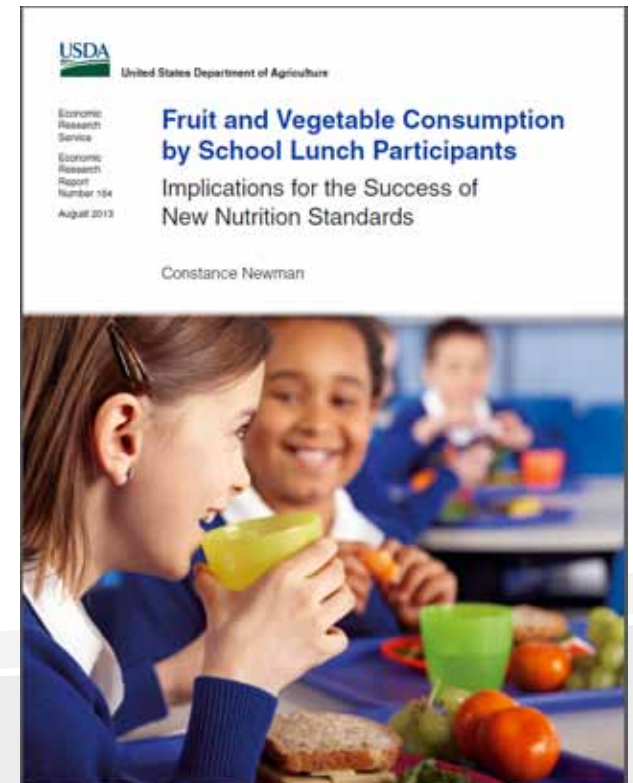


Find the full report at  
[http://ers.usda.gov/publications/err-economic-research-report/err154.aspx#.UnAdEqjN\\_OE](http://ers.usda.gov/publications/err-economic-research-report/err154.aspx#.UnAdEqjN_OE)



## Report Conclusion:

“...Other efforts will be needed to encourage more students to try the new fruit and vegetable offerings. **Multiple strategies for encouraging consumption—such as in-class educational efforts and altering the food environment...are probably needed.**”

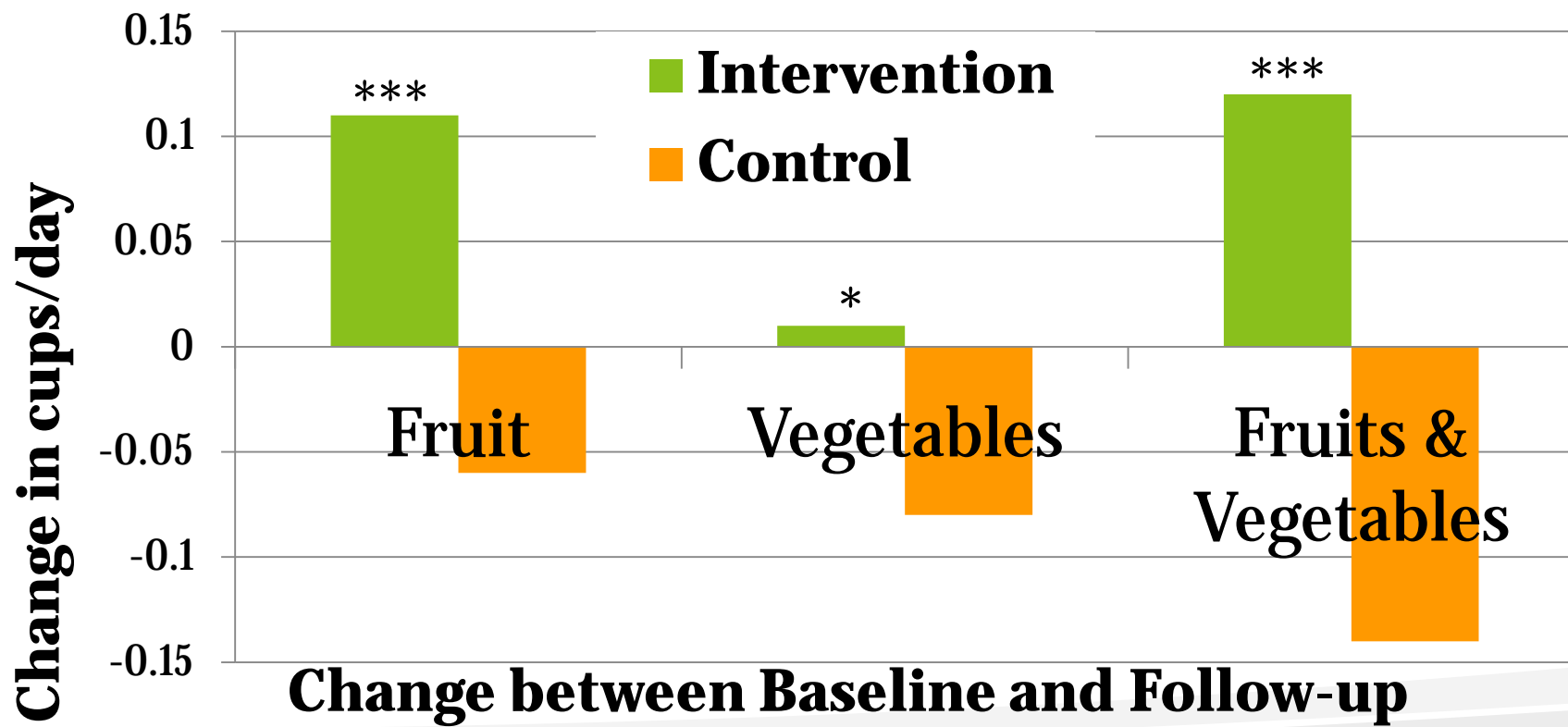




# California Children's Power Play! Campaign

## Impact on Student Intake of Fruits and Vegetables

**FIGURE 1: Change in Fruit and Vegetable Intake**



# Snap-Ed Students Consume 2X more Vegetables






 **Network Funded Students Select and Consume More Fruits and Veggies** 

Plate waste results indicate students participating in the SNAP-Ed nutrition education program\*:

**Select more fruits and vegetables:**

- Are almost 3 times more likely to select a vegetable every day
- Are twice as likely to select both a fruit and vegetable every day
- Select twice the variety of vegetables from the salad bar
- Select twice as many vegetable servings as control students




*Example of an elementary school cafeteria salad bar.*


**Consume more fruits and vegetables**

- SNAP-Ed students consume twice as many vegetables as control students

\*These results are based on students selecting a school lunch at least 3 of the 4 days of observation.



*Example of a SNAP-Ed student lunch tray before and after consumption.*



3 times more likely to select vegetable

2 times likely to select both F/V

2 times the variety of vegetables

2 times vegetable servings

## Youth Nutrition Education Program

### Are you a teacher in Fresno County?



Enrolled Teacher

The UC CalFresh Youth Nutrition Education Program provides no-cost curriculum, support and resources to transition through high school teachers in low-income Fresno County Schools to deliver nutrition and physical activity education in the classrooms!

To qualify for the no-cost program, at least 50% of the student population at the school must receive free or reduced priced meals through the [National School Lunch Program](#).

### Impacts

Knowledge change:

- 95% of youth can now identify healthy food choices

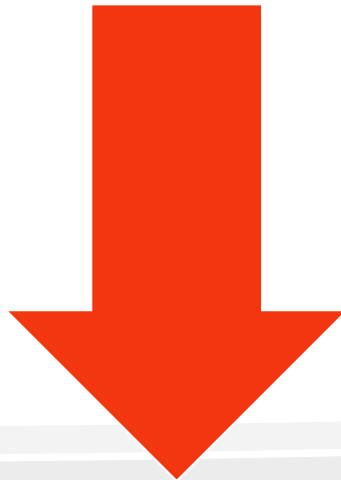
Behavior change:

- Compared to the beginning of the school year, teachers report that 95.8% of students try new foods offered at school more often.

# Nutrition Education DCC Evaluation Results



Knowledge of food groups  
Nutrient-rich food choices  
Physical activity

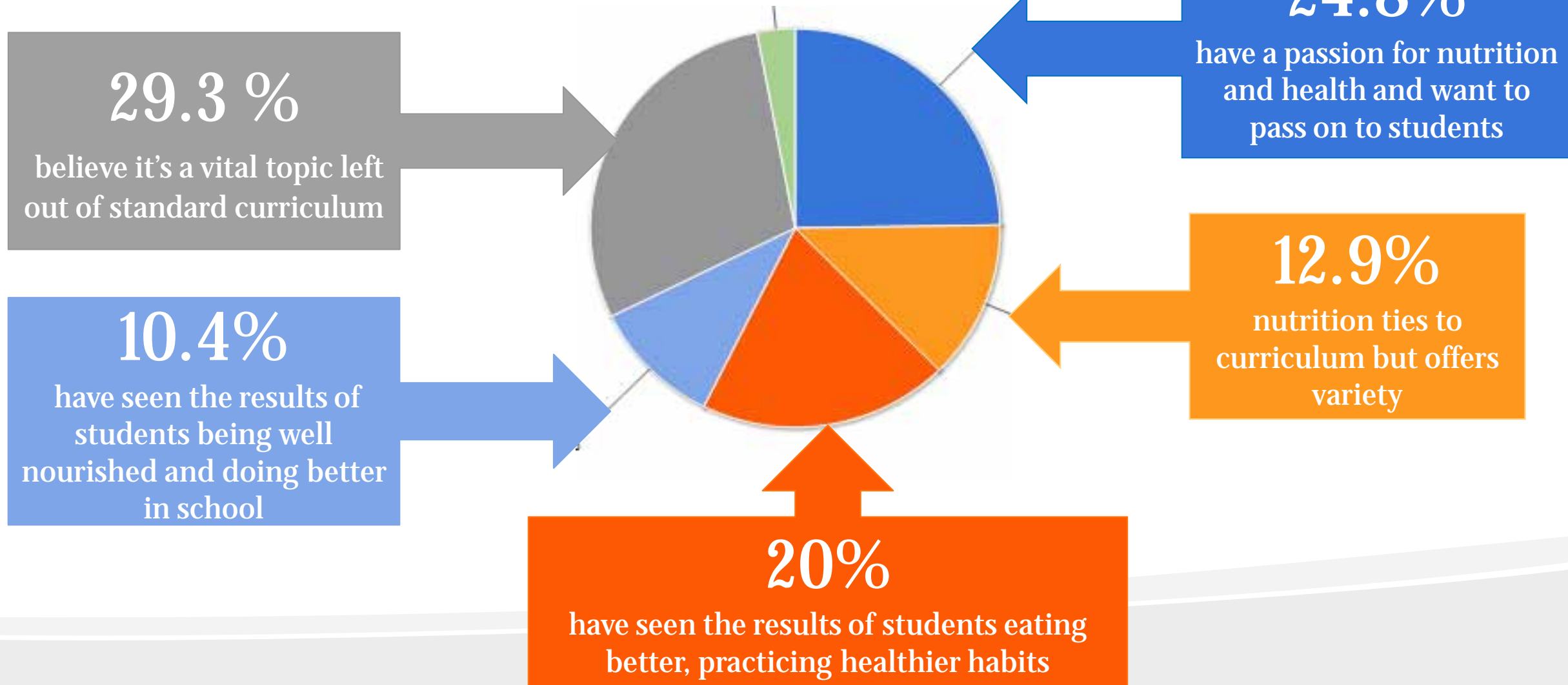


Extra foods  
Non-nutritive beverages  
Screen time



# #1 Reason why teachers teach nutrition:

What 2,084 teachers say



# What teachers are saying about nutrition education...



I see them making healthier choices in the lunch line, such as making sure they get their fruits and vegetables.

1<sup>st</sup> grade teacher  
Helen L. Dollaham Elementary

I am happy to report my students are making much better choices in the lunch line.

4<sup>th</sup> grade teacher  
Peabody Charter School

I love when their parents tell me that they are being served too much of something.

Kindergarten teacher  
Walnut Park Elementary

I had two former students come back and report that they were now eating healthy because I had taught them how and why.

Kindergarten teacher  
Westminster Avenue Elementary



# What are teachers requesting?

## And the survey says...

Tips and fun ideas for teaching nutrition education

Parent handouts

Guest speakers

Host a booth at health fair

Videos teaching nutrition

Field trip opportunities

Bilingual materials



# Federal Nutrition Education Funding 2010 Report to Congress

**Table 3: Nutrition Education Funding  
Per Participant in FY 2008 by Program**

Program	2008 Funding (Millions)	Participants <sup>1</sup> (Millions)	Dollars per Year Per Participant <sup>2</sup>
SNAP <sup>3</sup>	\$314.1	28.4	\$11.1
Team Nutrition	13.3	50.3	0.3
WIC-Nutrition Ed	358.0	8.7	41.1
WIC-Breastfeeding Promotion	131.8	1.5	87.8
FDPIR Nutrition Aides	1.2	0.09	13.8

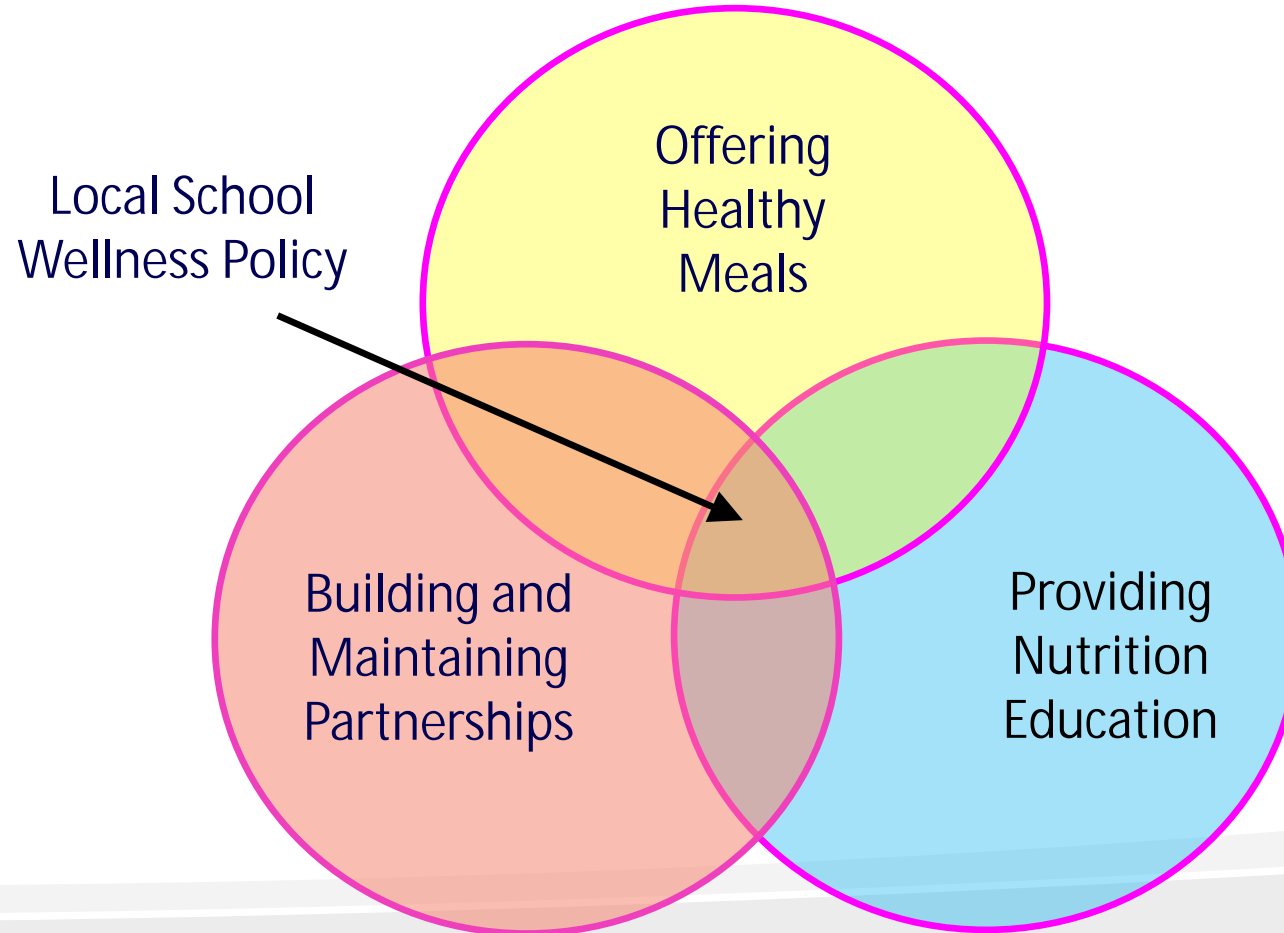
1 All programs based upon average monthly participation unless otherwise noted here. Team Nutrition participation is based on total school enrollment in the National School Lunch Program (NSLP). WIC Breastfeeding Promotion participants include pregnant and breastfeeding women only.

2. Per participant nutrition education dollars are based on unrounded program funding totals not shown.

3. Includes \$1.99M in SNAP-ED resources used at the Federal level.



# Building and Maintaining Partnerships



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# Cycle of Success





# What do teachers have to say about nutrition education in the classroom?

video



Questions????