Using a Systematic Approach and Theoretical Framework to Design a Curriculum for the Shaping Healthy Choices Program

Martin H. Smith, MS, EdD
Jessica D. Linnell, PhD
University of California, Davis

Shaping Healthy Choices Program: A Multi-Component, School-Based Intervention

Wellness Policies
Establishment of School Wellness Committee to implement wellness policies

School-wide Health Fairs
Support healthy behaviors through community partnerships

Social and Cultural Norms and Values

Sectors of Influence

Environmental Settings

Individual Factors

All components
Cultivation of a school community that promotes healthy lifestyle choices, values.

School Environment
Foster positive changes in the school lunchroom
Expand availability of regional produce

Home environment
Encourage healthy eating behaviors at home through parent newsletters

Nutrition Education & Promotion
Develop knowledge and use of reasoning skills
Promote consumption and enjoyment of fruits and vegetables
Encourage physical activity through classroom education & cooking demonstrations

Social Ecological Model Adapted from Dietary Guidelines for Americans, 2010
Development of a Curriculum for the Shaping Healthy Choices Program


• Descriptions of methods used for development are often limited

• Difficult to replicate methods for development of programs

→ Identified Need: Investigate and describe the use of a systematic approach to develop a nutrition curriculum for the Shaping Healthy Choices Program
Where do we start?
What is a Curriculum?

- Spend 1-2 minutes thinking about how you would *define* or describe the term, and what you see as the *purpose* of a curriculum.

- Please type your definition and the purpose of the curriculum in the chat box.
Defining Curriculum

- Poorly defined.
  - Vague descriptions
    - Formal coursework taken by students
    - Subjects taught at particular levels of school
  - Metaphors/Word derivations
    - A path from here to there
    - A course to be run (derived from currere = to run)
    - A map to guide learners
    - A prescription for learning and teaching
Curriculum: “So what?” Factor

- Understanding what a curriculum is, its component parts, and how a curriculum is organized to help enhance learning are important in order to develop new or adapt existing curricula.
- Developing this understanding is accomplished by considering necessary elements and limiting factors.
Three Pillars of a Curriculum & Curriculum Development

- Purpose
- Organization
- Theory
Curriculum Purpose

- **Purpose**: The advancement of learning
- **Operates across three domains**:
  - **Institutional**: Society and societal concerns
  - **Programmatic**: Translation of institutional-level goals into documents/materials (*learning experiences*)
  - **Classroom**: Implementation of documents/materials (*learning experiences*) by educators with learners
Curriculum Organization

- Learning experiences:
  - The fundamental components of a curriculum
  - Interactions between learners and their environment
  - Support acquisition of knowledge, skills, interest, and attitudes; lead to opportunities for application in real-world situations
Curriculum Organization

- **Vertical Organization**
  - Sequential organization of learning experiences
  - Subsequent learning experiences build upon previous ones; investigate matters more broadly and deeply (*spiral curriculum*)
  - Helps produce a maximum cumulative effect
  - Needed for significant changes in learners to occur
Curriculum Organization

- **Horizontal Organization**
  - Connecting learning experiences to:
    - Other subject matter
    - Real-world situations
  - Connecting learning to everyday life; providing a broader vision and significance to learning experiences
Learning Theories and Curriculum

- To be effective it is important to have a theoretical underpinning
- Learning theories in effective science education:
  - Organizational theory: Experiential Learning
  - Learning theory: Constructivism
  - Behavior change theory: Social Cognitive Theory
Experiential Learning

Three distinct components:

- **Concrete experience**: “Hands-on/Minds-on”; engages learners in exploration
- **Reflection**: Time where new learning is discussed and analyzed; new concepts/terms are discovered or introduced
- **Application**: New knowledge and skills are used in real-world situations; helps maximize learning
Constructivism

- **Constructivism** holds that knowledge is developed through experience.

- According to Dewey (1933), learning experiences are interactions between learners and their environment, each new experience draws upon prior ones, modifying them in some way.

- Two components (Richardson, 2003):
  - **Assimilation**: New information challenges prior knowledge
  - **Accommodation**: An adjustment in understanding
Guided Inquiry: Constructivist Strategy
Embedded within Experiential Learning,

- Inquiry is constructivist-based strategy; an effective way to do, learn, and teach science.
- Inquiry is used by researchers (scientific inquiry), students (inquiry learning), and educators (inquiry teaching)
- Common forms of inquiry: *guided; open*
Guided inquiry and the Curriculum

- Curricula that use guided inquiry are typically embedded in experiential learning
  - Experience: The “groan zone”; creates disequilibrium (confrontation)
  - Reflection: Challenge prior understanding; develop new understanding (assimilation)
  - Application: Adjust and solidify new understanding (accommodation)
Experience

Confrontation: Disequilibrium

Period of Reflection: New Term/Concept Discovery/Introduction

Assimilation: Challenge prior understanding; learn new concepts

Accommodation: Adjustment in understanding

X = Nutrition Concept

Application
Social Cognitive Theory (SCT)

Constructs of SCT:
- Reciprocal determinism
- Behavioral capability
- Self-efficacy
- Observational learning
- Reinforcements
- Expectations
Curriculum

- Spend 1-2 minutes thinking about **principal factors** you think are important to consider when developing a curriculum, and the principal steps necessary in the process.
- Please type your ideas in the chat box.
Key Factors: Curriculum Commonplaces

- Content
- Learners
- Context
- Educators
Nuts and Bolts of the *Discovering Healthy Choices* Curriculum

A Curriculum Developed for the Shaping Healthy Choices Program
1. Determining Need

- Identification of a societal need and associated learning objectives
- By framing learning objectives, such as content knowledge, attitude, skills, disposition, and identity around authentic societal needs or issues, learners make sense of concepts and theories while also finding meaning and connections to the real world
Children’s Nutrition: A Public Health Concern

• Children 31.7% of children are overweight or obese (Ogden, 2014)

• Children are consuming inadequate amounts of nutrient-rich foods (Guenther, Dodd, Reedy, Krebs-Smith, 2006)

• Children are not consuming recommended amounts of nutrients (Bailey, Dodd, Goldman, Gatche, Dwyer, Moshfegh et al., 2010)

Identified *Institutional* (Societal) Need: Nutrition interventions to improve consumption of nutrient-rich foods
School-Based Nutrition Interventions

• Nutrition education with garden activities demonstrates greater improvements of fruits and vegetables than nutrition education alone (Morris & Zidenberg-Cherr, 2001; Morgan, Warren, Lubans, Saunders, Quick & Collins, 2010)

• Greater improvements to dietary behaviors are observed when interventions integrate theory (Contento, 2007)

→ Identified Programmatic Need: Develop a multi-component, school-based nutrition education intervention that incorporates garden lessons and behavior change theory
2. Organization of Content

- Systematic and Intentional: Organization is a challenge of curriculum development

- Organization can affect meaning:
  
  *The king died, the queen cried.*
  
  *The queen cried, the king died.*

- Must be addressed early in process

- Allows for the establishment of vertical and horizontal organization
# Identification of Learning Objectives

## Concepts

<table>
<thead>
<tr>
<th>Concepts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Food grown around the world varies due to agricultural practices and climate</td>
<td></td>
</tr>
<tr>
<td>Foods people eat vary due to cultural traditions</td>
<td></td>
</tr>
<tr>
<td>Function of the lungs and heart</td>
<td></td>
</tr>
<tr>
<td>Physical activities differ by intensity</td>
<td></td>
</tr>
<tr>
<td>Different food groups have similar types of nutrients</td>
<td></td>
</tr>
<tr>
<td>Biological roles of nutrients</td>
<td></td>
</tr>
<tr>
<td>MyPlate Recommendations provides information about daily dietary needs</td>
<td></td>
</tr>
<tr>
<td>Serving size is a standardized reference amount</td>
<td></td>
</tr>
<tr>
<td>Foods are measured using cups, tablespoons, teaspoons, ounces, and grams</td>
<td></td>
</tr>
<tr>
<td>Nutritional requirements vary by life stage, gender, and physical activity</td>
<td></td>
</tr>
<tr>
<td>Nutrition Facts Labels is a source of information about nutrient content in food items</td>
<td></td>
</tr>
<tr>
<td>Food companies use strategies like catchy jingles, free toys, sale prices, and celebrity spokespeople to influence food choices</td>
<td></td>
</tr>
<tr>
<td>Reliable information can be used to choose healthy snacks</td>
<td></td>
</tr>
</tbody>
</table>
Vertical Organization

Concept

MyPlate Recommendations provides information about daily dietary needs
Serving size is a standardized reference amount
Foods are measured using cups, tablespoons, teaspoons, ounces, and grams
Nutrition Facts Labels are a source of information about nutrient content in food items

Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
## Final Sequence of Modules

<table>
<thead>
<tr>
<th>Concept</th>
<th>Module</th>
<th>Module Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food grown around the world varies due to agricultural practices and climate</td>
<td>1</td>
<td>Introduction to Nutrition, Agriculture, and Gardening</td>
</tr>
<tr>
<td>Foods people eat vary due to cultural traditions</td>
<td>2</td>
<td>Getting Physically Active</td>
</tr>
<tr>
<td>Function of the lungs and heart</td>
<td>3</td>
<td>Nutrients We Need</td>
</tr>
<tr>
<td>Physical activities differ by intensity</td>
<td>4</td>
<td>Food Math</td>
</tr>
<tr>
<td>Different food groups have similar types of nutrients</td>
<td>5</td>
<td>MyPlate</td>
</tr>
<tr>
<td>Biological roles of nutrients</td>
<td>6</td>
<td>Nutrition Facts Labels</td>
</tr>
<tr>
<td>Foods are measured using cups, tablespoons, teaspoons, ounces, and grams</td>
<td>7</td>
<td>Consumerism</td>
</tr>
<tr>
<td>Serving size is a standardized reference amount</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MyPlate Recommendations provides information about daily dietary needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritional requirements vary by life stage, gender, and physical activity</td>
<td>8</td>
<td>Making Healthy Snacks</td>
</tr>
</tbody>
</table>
Horizontal Organization

- **Classroom Activities**: Learn Concepts
- **Garden Activities**: Apply new knowledge in garden-enhanced lessons
- **Take Home Activities**: Apply new knowledge at home
3. Determining Acceptable Evidence of Learning

- Critical step – How will I determine if learning has occurred?
- Once learning objectives have been identified and content organized, select the type of evidence that will be used to determine if learning was achieved
- **Note:** Think beyond quizzes and exams
# Determination of Evidence of Learning

<table>
<thead>
<tr>
<th>Concept</th>
<th>Module</th>
<th>Evidence of Learning (Students will be able to…)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food grown around the world varies due to agricultural practices and climate</td>
<td>1</td>
<td>Describe that there are similarities of foods grown where there are similar climates</td>
</tr>
<tr>
<td>Foods people eat vary due to cultural traditions</td>
<td>1</td>
<td>Describe different cultural foods and traditions from various countries</td>
</tr>
<tr>
<td>Function of the lungs and heart</td>
<td>2</td>
<td>Explain that the heart pumps blood around the body and the lungs are the point of gas exchange between oxygen and carbon dioxide</td>
</tr>
<tr>
<td>Physical activities differ by intensity</td>
<td>2</td>
<td>Draw a graph of their heart and breathing rates at different intensities and observe the differences</td>
</tr>
<tr>
<td>Different food groups have similar types of nutrients</td>
<td>3</td>
<td>Discuss similar characteristics between foods with similar nutrients after categorizing them</td>
</tr>
<tr>
<td>Biological roles of nutrients</td>
<td>3</td>
<td>Students will be able to describe the specific biological function of selected macronutrients and micronutrients</td>
</tr>
<tr>
<td>Foods are measured using cups, tablespoons, teaspoons, ounces, and grams</td>
<td>4</td>
<td>Demonstrate usage of appropriate measuring tools for different foods (i.e., tablespoons for small amounts, cups for large amounts)</td>
</tr>
<tr>
<td>Serving size is a standardized reference amount</td>
<td>4</td>
<td>Solve a mathematical problem to demonstrate the number of servings within one portion</td>
</tr>
<tr>
<td>MyPlate Recommendations provides information about daily dietary needs</td>
<td>5</td>
<td>Construct a daily meal plan based on MyPlate Recommendations</td>
</tr>
<tr>
<td>Nutritional requirements vary by life stage, gender, and physical activity</td>
<td>5</td>
<td>Describe differences between daily meal plans for people with a variety of age, genders, and physical activity levels</td>
</tr>
<tr>
<td>Nutrition Facts Labels is a source of information about nutrient content in food items</td>
<td>6</td>
<td>Discuss the information on a food label that helped them make a healthy choice</td>
</tr>
<tr>
<td>Food companies use strategies like catchy jingles, free toys, sale prices, and celebrity spokespeople to influence food choices</td>
<td>7</td>
<td>Act out a commercial that employs strategies that food companies use.</td>
</tr>
<tr>
<td>Reliable information can be used to choose healthy snacks</td>
<td>8</td>
<td>Demonstrate the use of Nutrition Facts Labels and MyPlate recommendations in the assembly of a healthy snack</td>
</tr>
</tbody>
</table>
Example of Evidence of Learning: Module 6

<table>
<thead>
<tr>
<th>Concept</th>
<th>Module</th>
<th>Evidence of Learning (Students will be able to…)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition Facts Labels is a source of information about nutrient content in food items</td>
<td>6</td>
<td>Discuss the information on a food label that helped them make a healthy choice</td>
</tr>
</tbody>
</table>
4. Identification and Development of Learning Experiences

- Curriculum development requires deliberate attention to detail as to how learning experiences are to be taught
- Develop experiences based on organized content; acceptable evidence of learning can help drive development; and ground experiences in effective pedagogy (e.g., inquiry; experiential learning)
5. Preliminary Evaluation

- Developers commit to review:
  - Learning objectives
  - Content organization
  - Sequence of experiences
  - Evidence of learning
6. Pilot Testing

- Focuses on feedback informs developers of the usability of a curriculum and potential revisions
- Specific information obtained from pilot testing:
  - Developmental appropriateness
  - Evidence of understanding
  - Requisite materials and resources
7. Outcome Evaluation

- Necessary final step in the curriculum development process
- Used to determine if intended results have been achieved through the use of a curriculum
Module 6: Food Labels

Final Activities

Background Information

The Food and Drug Administration requires most packaged foods and beverages to have a Nutrition Facts Label ("Labeling & Nutrition,” 2011). Food manufacturers provide the nutritional content of their product to help consumers make informed choices about the foods they eat. Serving size is the first thing listed at the top of the label. Each type of food has a standard serving size and the nutrients listed on the label are based on that serving. Next, the label displays the amount of calories in the serving and how many of those calories come from fat.

The amounts of nutrients are broken out individually within one serving and are represented by grams (g) and percent (% daily value). The percent daily value represents the percentage of the recommended daily amount of a nutrient that is provided in one serving of a food. The percent daily value is based on a 2,000 calorie diet, so if your daily calorie needs are greater or less than 2,000, the percent daily value may be different than what is listed on the nutrition facts label. Percent daily value can help us decide if a food is high or low in a nutrient; 5% or less is low and 20% or more is high.

The first nutrient listed is total fat. Followed by two subgroups of fats, saturated fat and trans fat. It is recommended that we choose foods that are low in saturated fat and avoid foods with trans fat (Dietary Guidelines for Americans, 2010). Cholesterol and sodium are listed next. It is recommended that we choose foods that are low in cholesterol and sodium.

Total carbohydrates represent starches, sugars, and fibers. The two subgroups of carbohydrates listed on food labels are dietary fiber and sugars. It is recommended that we choose foods that are high in fiber. Sugars represent all types of sugar in the food, including those that are naturally in the food (e.g., fruit and milk) and added sugars. It is recommended that we reduce our intake of food that are high in added sugars. The Nutrition Facts Label does not specify how many grams or percent daily value of added sugars, but we can look at the ingredients list instead. Listed below sugars are pitches, which is listed in grams but not percent daily value.

Vitamins and minerals are listed together. The four vitamins and minerals shown on food labels are vitamin A, vitamin C, calcium, and iron. It is recommended that we choose foods that are high in these vitamins and minerals.

Ingredients are displayed near the Nutrition Facts Label. These ingredients are listed in order from greatest amount to the lowest amount. The ingredients list can be used to avoid foods that are high in added sugars. If a food has sugar listed as one of the first few ingredients, the food is high in added sugars. Notices for added sugars include sugar, maltose, honey, maltose, dextrose, sucrose, and fructose.
Select which of these dairy foods (A, B, or C) you think is the healthiest food.
Polling question

• Which dairy did you select?
• Food A
• Food B
• Food C
1 slice of American cheese

½ cup of vanilla ice cream

1 cup of low-fat chocolate milk

• Would you make a different choice?

• If you select a different food item as the healthiest, explain why.

• Please enter your new selection and explanation as to why in the chat box.
# Garden Application Activity

## Nutrition Facts

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>Calories</th>
<th>Calories from Fat</th>
<th>Total Fat (g)</th>
<th>Saturated Fat (g)</th>
<th>Trans Fat (g)</th>
<th>Cholesterol (mg)</th>
<th>Sodium (mg)</th>
<th>Total Carbohydrate (g)</th>
<th>Dietary Fiber (g)</th>
<th>Sugars (g)</th>
<th>Protein (g)</th>
<th>Vitamin A (R. Ade)</th>
<th>Vitamin C (mg)</th>
<th>Calcium (mg)</th>
<th>Iron (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a</td>
<td>2,000</td>
<td>n/a</td>
<td>65</td>
<td>20</td>
<td>n/a</td>
<td>300</td>
<td>2500</td>
<td>300</td>
<td>28</td>
<td>n/a</td>
<td>50</td>
<td>500</td>
<td>60</td>
<td>1300</td>
<td>18</td>
</tr>
<tr>
<td>Beets</td>
<td>1 cup</td>
<td>60</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>128</td>
<td>16</td>
<td>4</td>
<td>16</td>
<td>2</td>
<td>8</td>
<td>26</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Black Beans</td>
<td>1 cup</td>
<td>228</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>40</td>
<td>14</td>
<td>2</td>
<td>16</td>
<td>0</td>
<td>6.4</td>
<td>46</td>
<td>3.6</td>
</tr>
<tr>
<td>Black-Eyed Peas</td>
<td>1 cup</td>
<td>198</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>16</td>
<td>0</td>
<td>108</td>
<td>0.6</td>
<td>42</td>
<td>4.2</td>
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<tr>
<td>Broccoli</td>
<td>1 cup</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>28</td>
<td>50</td>
<td>58</td>
<td>42</td>
<td>0.6</td>
</tr>
<tr>
<td>Cabbage</td>
<td>2 cups</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>26</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>56</td>
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<td>0.6</td>
</tr>
<tr>
<td>Carrots</td>
<td>1 cup</td>
<td>53</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>4</td>
<td>11</td>
<td>712</td>
<td>8</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>Corn</td>
<td>1 cup</td>
<td>124</td>
<td>18</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>28</td>
<td>10</td>
<td>4</td>
<td>14</td>
<td>10</td>
<td>2</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Cucumbers</td>
<td>1 cup</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Eggplant</td>
<td>1 cup</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Fresh Peas</td>
<td>1 cup</td>
<td>118</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>8</td>
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<td>8</td>
<td>8</td>
<td>8</td>
<td>56</td>
<td>38</td>
<td>36</td>
<td>2.2</td>
</tr>
<tr>
<td>Garlic</td>
<td>1 clove</td>
<td>4</td>
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<td>0</td>
<td>0</td>
<td>1</td>
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<td>1</td>
<td>5</td>
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<td>2</td>
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<td>Kale</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>40</td>
<td>15</td>
<td>3</td>
<td>3</td>
<td>158</td>
<td>1958</td>
<td>187</td>
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</tr>
<tr>
<td>Kohlrabi</td>
<td>1 cup</td>
<td>36</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>8</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>34</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Leeks</td>
<td>1 cup</td>
<td>54</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
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<td>0</td>
<td>74</td>
<td>10</td>
<td>32</td>
<td>1.8</td>
</tr>
<tr>
<td>Lettuce</td>
<td>2 cups</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>Okra</td>
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<td>32</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</table>
Take Home Application Activities

**Take Home Application Activity**

- Visit a grocery store or market with your family. Compare food labels of similar food items and when comparing them, choose which food you think is a healthier option. Answer these questions:

  1. What foods did you compare?
  2. What did you look for to compare the two foods?
  3. Which one do you think is the healthier food and why?

**Goal Setting Activity**

- What are some things you can do to make healthy choices about foods?

- What are some things your family members can do to make healthy choices about foods?
Classroom Activity: Decide which food is the healthiest using complex info

Understanding how to make decisions based on Nutrition Facts Label

Behavioral Capability: Develop knowledge and reasoning skills required to make food choices using Nutrition Facts labels

Social Cognitive Theory

Self-Efficacy: Practice using skills of making choices using Nutrition Facts Labels in real world setting

Garden & Take Home Application Activities: Apply skills in authentic settings (grocery store)

Reciprocal Determinism: Engage in activities with family members in real world setting

Experiential Learning Organizational Theory

Classroom Activity: Decide which food is the healthiest using complex info

Understanding how to make decisions based on Nutrition Facts Label

Confrontation: Disequilibrium

Period of Reflection: New Term/Concept Discovery/Introduction

Assimilation: Challenge prior understanding; learn new concepts

Accommodation: Adjustment in understanding.

Constructivist Learning Theory

Behavioral Capability: Develop knowledge and reasoning skills required to make food choices using Nutrition Facts labels

Social Cognitive Theory

Self-Efficacy: Practice using skills of making choices using Nutrition Facts Labels in real world setting

Garden & Take Home Application Activities: Apply skills in authentic settings (grocery store)

Reciprocal Determinism: Engage in activities with family members in real world setting

Experiential Learning Organizational Theory

Classroom Activity: Decide which food is the healthiest using complex info

Understanding how to make decisions based on Nutrition Facts Label

Confrontation: Disequilibrium

Period of Reflection: New Term/Concept Discovery/Introduction

Assimilation: Challenge prior understanding; learn new concepts

Accommodation: Adjustment in understanding.
Summary of the Systematic Approach Used to Develop the Discovering Healthy Choices Curriculum

Development team: experts in nutrition, science education, youth development, inquiry-based education, garden-based learning, and 8 undergraduate students

Design process: team met weekly for 9 months
Conclusions

• Using a systematic approach to curriculum development provided the design team with a structure that allowed for thoughtful, intentional curriculum design.

• Using this method resulted in curriculum activities with focused learning objectives and opportunities to determine evidence of student understanding.

• Activities were grounded in a theoretical framework and were well-connected to overall SHCP goals.

• Pilot-testing before implementing a curriculum in a randomized controlled intervention provides validation that activity procedures are understandable and that students are able to learn the curriculum concepts and skills as intended.
Conclusions

• The process used in curriculum development may be central to developing curricula that can help reduce the risk of obesity and improve consumption of nutrient-rich foods such as fruits and vegetables.

• Need a systematic approach and a curriculum framework that integrates behavior change and education theory to increase the potential to generate desired behavior change.

• Four Commonplaces: **Content** often dominates a curriculum; renders curriculum ineffective because **learners**, **context**, and **educators** are not addressed effectively; imbalance has a negative effect on the potential for learning to occur (Null, 2011).
Acknowledgments

Shaping Healthy Choices Program Team

University of California, Davis
Kelley Brian, Program Representative, Department of Nutrition
Marilyn Briggs, Co-Director of Center for Nutrition in Schools, Department of Nutrition
Gail Feenstra, Agricultural Sustainability Institute
Carol Hillhouse, Agricultural Sustainability Institute
Anna Jones, Postdoctoral Scholar, Department of Nutrition
Carl L. Keen, Department of Nutrition
Jeri Ohmart, Agricultural Sustainability Institute
Lenna Ontai, UCCE Specialist, Department of Human Ecology
Sara Schaefer, Foods for Health Institute
Rachel Scherr, Assistant Project Scientist, Department of Nutrition
Francene Steinberg, Department of Nutrition
Heather M. Young, Betty Irene Moore School of Nursing
Sheri Zidenberg-Cherr, UCCE Specialist, Department of Nutrition, Co-Director of the Center for Nutrition in Schools

University of California Cooperative Extension Advisors
Yvonne Nicholson, Sacramento County
Theresa Spezzano, Stanislaus and Merced Counties

Undergraduate Interns
Kelly Ho, Hee Joo “Kristi” Kim, Hillary Lawson, Erica Oberg, Ally Sy, Michelle Wong, Noel Zeng, and Courtney Zimmerman

Funding provided by: UCANR 11-1018, USDA 2011-38420-20082, CRIS CA D NTR-2060-H
Discovering Healthy Choices is currently under peer review with University of California Division of Agriculture and Natural Resources. Once published it will be available for free download.