### Discovering Healthy Choices

Module 8: Making Healthy Snacks

> UNIVERSITY OF CALIFORNIA Agriculture and Natural Resources

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### Adapted from Nutrition to Grow On

This curriculum is an adaptation of *Nutrition to Grow On*, a garden-enhanced nutrition curriculum for upper elementary school children. Authors: Jennifer Morris and Sheri Zidenberg-Cherr, Department of Nutrition, University of California, Davis in collaboration with the California Department of Education and Mary Shaw, Solano County Master Gardener, University of California Cooperative Extension.

### **Results from Research**

This curriculum was tested as part of the Shaping Healthy Choices Program research project during the 2012–2013 school year. Fourth grade youth participating in the Shaping Healthy Choices Program increased knowledge about nutrition and consumption of vegetables, and the rates of obesity were reduced from 56% to 38% (Scherr et al. 2014). In a subsequent study the Discovering Healthy Choices curriculum was implemented by fourth-grade teachers as part of the Shaping Healthy Choices Program in the 2013–2014 school year. Participating youth improved their knowledge about nutrition, critical thinking skills, and ability to identify vegetables (Linnell et al. 2016). Additionally, there was a significant reduction in average body mass percentile-for-age. The Shaping Healthy Choices Program was then piloted through the University of California CalFresh SNAP-Ed program and University of California Cooperative Extension and positive outcomes were observed, though they varied among implementation sites (Bergman et al. 2018). The research team attributed the variation to differences in fidelity to the curriculum, with the highest fidelity corresponding to the greatest improvements in outcomes.

Funding for research was provided by UCANR #11-1018 and USDA 2011-38420-20082.

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### **Teaching and Learning Strategies**

All activities in the *Discovering Healthy Choices* curriculum were designed using experiential learning and inquiry. Experiential learning is grounded in the idea that experience is essential to learning and understanding. Specifically, experiential learning involves a recurring sequence of three distinct steps: 1) an experience ("Procedure/ Experiencing") that involves learner exploration; 2) a period of discussion and reflection ("Sharing, Processing, and Generalizing"), where learners share their reactions and observations, process their experience, and make generalizations to real-life examples; and 3) an opportunity to apply ("Apply") new knowledge and skills in an authentic manner, which helps learners deepen and broaden their understanding (it helps learning last!).

Inquiry is a teaching and learning strategy whereby learners are engaged in activities that require the observation and manipulation of objects and ideas in order to construct knowledge and develop skills. Inquiry is grounded in experience, focuses on the use and development of critical thinking skills, and targets the learning and application of specific content knowledge. Furthermore, inquiry starts with a question, and effective questioning strategies are critical when facilitating inquiry-based learning. Open-ended questions or prompts (e.g., "Explain what you know about..."; or "Discuss your understanding of...") promote learner inquiry and are considered more effective than closed-ended questions or prompts (e.g., "Name the parts of..."; or "What is the name of...?").

The inquiry-based activities in the *Discovering Healthy Choices* curriculum were designed using the 5-step Experiential Learning Cycle by Pfeiffer and Jones (1983): Experience, Sharing, Processing, Generalizing, and Application. It is recommended that adequate time be allotted for youth learners to proceed through each step in order for learning to be maximized.

### **Behavior Change Strategies**

As part of *Discovering Healthy Choices*, learners will discover nutrition concepts through hands-on and gardenbased nutrition activities. Garden-based activities allow youth to enhance nutrition knowledge, preferences for vegetables, and consumption of fruits and vegetables, and also gives them an opportunity to explore agriculture and the environment while improving life skills, self-esteem, social skills, and behavior (Heim et al. 2009; Jaenke et al. 2012; Lineberger and Zajicek 2002; Linnell et al. 2016; McAleese and Rankin 2007; Morgan et al. 2010; Morris and Zidenberg-Cherr 2002; Parmer et al. 2009; Robinson-O'Brien et al. 2009; Scherr et al. 2014).

The *Discovering Healthy Choices* curriculum activities were designed using the Social Cognitive Theory as a framework (Glanz and Viswanath 2008). The structure and content of the activities address Social Cognitive Theory domains of behavioral capability, self-efficacy, and reciprocal determinism. A detailed description of how the behavior change strategies were applied is available elsewhere (Linnell et al. 2016).

### Target Audience

*Discovering Healthy Choices* was developed for youth in upper elementary school (grades 4–6) and to be used in formal and non-formal educational settings. Curriuclum activities support educational standards for grades K–12 and may be adapted for use in other grade levels.

### Organization of the Learning Environment: Creating Environments Where Learning Happens

The activities in the *Discovering Healthy Choices* curriculum were designed to be facilitated in a small grouplearning environment. Learners construct understanding through inquiry using observations, the manipulation of objects and ideas, and personal reflection. However, learning is a social endeavor where dialogue and reflection with others are critical elements. Therefore, creating physical and social environments where learners can carry out inquiry will help learners organize their thoughts and develop an understanding of the content and processes being emphasized in specific curriculum activities.

### **Organization of the Curriculum**

The modules are sequenced so that foundational concepts are discovered first and then built upon with more advanced concepts as they continue through the modules.

Each module consists of one hands-on activity, one application activity in the instructional garden, and multiple take-home application activities. When learners apply their new knowledge and skills in authentic situations, this is when they are able to develop deeper understanding of the subject matter. At this point, youth have already completed the hands-on activities that have introduced new concepts and skills. The application activities provide the youth with the opportunity to take what they have learned and apply it to independent, real-world situations in the instructional garden, at home, or in the classroom. This application of knowledge is a critical step of the learning process.

### Curriculum Activity Layout

• Activity Title

The activity title introduces the facilitator to the topic that will be addressed during the activity.

• Background Information

This introductory section provides facilitators with a brief overview of the subject matter and provides examples that help to explain the importance of the topic.

**Facilitator Tip:** The background information is not meant to be shared with the youth prior to the activity. Rather, it is intended to support facilitators by providing factual information that may help ground and inform group discussions.

• Life Skills

Life skills are abilities that help youth become productive, contributing members of society. The activities are designed to provide youth with the opportunity to practice particular life skills that are utilized in everyday life. The life skills targeted are listed for each activity (Norman and Jordan n.d.).

### • Subject Links

This describes other subject areas that are connected to the module. Education Standards Supported

This curriculum supports Common Core State Standards, Next Generation Science Standards, and California Nutrition Education Competencies. Specific details for standards addressed for each grade level is described in the "Education Standards Supported" section on page 9.

### • Time Required

Each module includes an estimate of the time needed to complete the activities. The actual time required for the activities will vary based on level of learner interest, size of the group, age of the group members, and the setting in which the activities take place.

### • Learning Objectives: Concepts and Vocabulary

Facilitators are provided with a list of defined concepts and vocabulary that is meant to be discovered by the youth during their exploration and completion of the activities. The list should not be provided to the youth at the beginning of the activity. At the end of each activity, the facilitators should ensure that the appropriate terms and concepts have been discovered by or introduced to the youth.

### • Suggested Groupings

Suggestions are provided for the group size designed for each activity. The suggested groupings are meant to help facilitate quality learning among the youth. Some activities are designed for youth to work in either small groups, large groups, or individually.

### Materials Needed

A list of the materials needed to complete the activities is provided for the facilitator. The list describes the materials to be used. Most materials are provided (these are marked with an \*); however, other materials will need to be obtained prior to activity implementation.

### • Getting Ready

This list describes what needs to be done by the facilitator to prepare for the activity, how many of each of the materials to prepare, and what tasks need to be completed prior to the beginning of the activity.

### Opening Questions/Prompts

Questions or prompts presented at the beginning of each activity are meant to draw the youth into the topic being addressed in the activity. Responses to the questions will provide the facilitator with an understanding of what the youth already know about the topic. Facilitators should encourage the youth to record their answers to these introductory questions on the provided flip chart paper, as this is an important part of the learning process. This is the point when the activity begins with the youth. Opening Questions/Prompts should be asked as they are written. Open-ended questioning is a key element of inquiry-based learning.

### • Procedure (Experiencing)

This is the part of the curriculum when the youth experience and complete the activity itself. It is highly recommended that facilitators read the procedure in its entirety before implementing with the youth so that the activity flows smoothly. It is important for youth to record their observations, ideas, and other thoughts during the procedure on the flip chart paper provided, as this is an important part of the learning process.

### • Facilitator Tips

These are suggestions and additional information for the facilitator.

### • Sharing, Processing, and Generalizing

Following the procedure, there is a period of reflection, during which time the youth come back together as one group and share their observations with each other. This phase provides youth an opportunity to communicate their findings, listen to what others discovered, consider the various thought processes, and learn from each other. It helps to solidify what the youth have learned throughout the course of the activity. This phase also contains prompts that allow the youth to engage in thinking about how they went about solving a problem. This is called meta-cognition, which is considered a key element in developing a deeper understanding.

### • Concept and Term Discovery/Introduction

At this point of the activity, most of the concepts will have most likely already been discovered by the youth. Many concepts will have already been defined by now as well. However, some concepts may have been missed or poorly understood and need to be clarified; additionally, technical terms may need to be introduced to the youth. Ensure that all terms/concepts have been discovered or introduced to the youth. Additionally, make certain that any misconceptions have been addressed.

### **Starting an Instructional Garden**

### Books and Downloadable Resources

Gardens for Learning: A Guide for Creating and Sustaining Your School Garden. Available at the California School Garden Network website, <u>http://www.csgn.org</u>.

Getting Started: A Guide for Creating School Gardens as Outdoor Classrooms. Available at the Center for Eco Literacy website, <u>http://www.ecoliteracy.org/downloads/getting-started</u>.

Sunset Western Garden Book (9th ed). 2012. New York, NY: Time Home Entertainment.

### School Garden Grant Opportunities

California Fertilizer Foundation awards grants of \$1,200 to California K–12 school garden programs. Awards include educational materials. Applications reviewed in January and June. The grant application is available at the California Fertilizer Foundation website, <u>http://www.calfertilizer.org</u>.

KidsGardening offers a variety of grant programs with awards of up to \$500. Information about grants is available at the KidsGardening website, <u>https://kidsgardening.org.</u>

Western Growers Foundation offers grants and start-up supplies for school gardens in California and Arizona. Information and grant applications are available at the Western Growers Foundation website, <u>http://www.wga.com</u>.

### **Extension Opportunities Beyond the Learning Setting**

*Discovering Healthy Choices* was developed as part of the Shaping Healthy Choices Program. The Shaping Healthy Choices Program is a multicomponent approach to improving children's food choices. Other components of this program include a curriculum for cooking demonstrations, *Cooking Up Healthy Choices*, and family newsletters called *Team Up for Families*.

*Cooking Up Healthy Choices* is directly linked to *Discovering Healthy Choices*. It was developed to offer more opportunities for youth to apply the concepts they have learned through the participation in five cooking demonstrations.

The *Team Up for Families* newsletters include messages about what the youth are learning in the *Discovering Healthy Choices* curriculum, in addition to positive nutrition-related parenting practices. Each of the eight newsletters is designed to link to each of the eight modules in *Discovering Healthy Choices*.

### Food Safety and Other Considerations

The *Discovering Healthy Choices* curriculum includes activities where food is prepared for consumption and for handling. When preparing foods, it is important to follow food safety guidelines published by the Food and Drug Administration at their website, <u>http://www.fda.gov/Food/FoodborneIllnessContaminants/BuyStoreServeSafeFood/</u>

ucm255180.htm. It is also important to be aware of youths' food allergies and alter recipes accordingly.

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## **Educational Standards Supported**

## Next Generation Science Standards Supported

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Life Science Progression														
LS1.A Structure and function	2, 3				•	•	•	•	•	•	•	•	•	•
LS1.C Organization for matter and energy flow in organisms	2, 3, 5	•	•	•	•	•	•	•	•	•	•	•	•	•
LS2.A Interdependent relationships in ecosystems	2, 3, 7	•	•	•	•	•	•							
LS2.B Cycles of matter and energy transfer in ecosystems	2, 3, 7	•	•	•	•	•	•	•	•	•	•	•	•	•
LS4.D Biodiversity and humans	2, 3, 7	•	•	•	•	•	•							
Science and Engineering Practices					-				-		-	-		
<ol> <li>Asking questions and defining problems</li> </ol>	$1, 2, 3, 4, 5, 6, \\7, 8$	•	•	•	•	•	•	•	•	•	•	•	•	•
3. Planning and carrying out investigations	2, 3, 4, 5, 7	•	•	•	•	•	•	•	•	•	•	•	•	•
4. Analyzing and interpreting data	2, 3, 4, 5, 7, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
5. Using mathematics and computational thinking	2, 4, 6	•	•	•	•	•	•	•	•	•	•	•	•	•
6. Constructing explanations and designing solutions	2, 3, 4, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
7. Engaging in argument from evidence	1, 2, 3, 4, 7	•	•	•	•	•	•				•	•	•	•
8. Obtaining, evaluating, and communicating information	$1, 2, 3, 4, 5, 6, \\7, 8$	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>Crosscutting Concepts</b>														
1. Patterns	2, 3, 4, 5, 7, 8	•	•	•	•	•	•	•	•	•				
3. Scale, Proportion, and Quantity	2, 3, 4, 6, 8	•	•	•	•	•	•							
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	Modules	K	1	7	3	4	ß	9	7	8	6	10	11	12
<b>Reading Standards for Literature</b>	nture													
Key Ideas and Details	1	•	•	•	•	•	•	•	•	•	•	•	•	•
Craft and Structure	1, 2, 3, 4, 5, 6, 7, 8	•	•		•	•		•	•	•	•	•	•	•
Range of Reading and Level of Text Complexity	1, 2, 3, 4, 5, 6, 7, 8	•	•											
<b>Reading Standards for Informational Text</b>	mational Text												-	
Key Ideas and Details	1, 2, 3, 5	•	•	•	•	•	•	•	•	•	•	•	•	•
Craft and Structure	1, 2, 3, 5, 6	•	•	•	•	•	•	•	•	•	•	•	•	•
Integration of Knowledge and Ideas	1, 3, 7	•	•	•	•	•	•	•		•				
Range of Reading and Level of Text Complexity	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•							
<b>Reading Standards: Foundational Skills</b>	ional Skills													
Print Concepts	1, 2, 3, 4, 5, 6, 7, 8	•	•	ı	I	1	1	ı	ı	1	1		1	
Phonological Awareness	1, 2, 3, 4, 5, 6, 7, 8	•	•	ı	I	ı	ı	ı	ı	ı	ı	ı	ı	ı
Phonics and Work Recognition	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	I	I	ı	I	ı	I	I
Fluency	1, 2, 3, 4, 5, 6, 7, 8		•	•	•	•	•	ı	ı	ı	ı	ı	1	ı
Writing Standards														
Text Types and Purposes	1, 2, 3, 4, 5, 6, 7, 8				•	•	•	•	•	•	•	•	•	•
Production and Distribution	-				•	•	•	•	•	•	•	•	•	•
of Writing														
Research to Build and Present Knowledge	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
Range of Writing	1, 2, 3, 4, 5, 6, 7, 8	1	-	I	•	•	•	•	•	•	•	•	•	•
<b>Speaking and Listening Standards</b>	dards	-			-		-	-	-	-	-	-	-	
Comprehension and Collaboration	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
Presentation of Knowledge and Ideas	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
Language Standards														
Conventions of Standard English	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
Knowledge of Language	1, 2, 3, 4, 5, 6, 7, 8	1	1	•	•	•	•	•	•	•				
Vocabulary Acquisition and Use	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
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# Educational Standards Supported (continued)

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	Modules	6	7	8	6	10	11	12
Reading Standards for Literacy in History/Social Studies								
Integration of Knowledge and Ideas	1, 2, 4	•	•	•	•	•		
Reading Standards for Literacy in Science and Technical Subjects								
Key Ideas and Details	2, 3, 4	•	•	•	•	•	•	•
Integration of Knowledge and Ideas	2, 3, 4	•	•	•	•	•	•	•
Range of Reading and Level of Text Complexity	2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•
Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects	ind Technical Subjects							
Text Types and Purposes	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•
Production and Distribution of Writing	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•
Research to Build and Present Knowledge	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•
Range of Writing	1, 2, 3, 4, 5, 6, 7, 8	•	•	•	•	•	•	•
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# Educational Standards Supported (continued)

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	Modules	K	1	2	3	4	5	6	7	8	9	10	11	12
Counting and Cardinality	2, 4, 5, 6	•	I	ı	I	I	I	I	I	I	-	I	ı	1
Operations and Algebraic Thinking	2, 3, 4, 5, 6	•	•	•	•	•		I			I	I	I	1
Number and Operations in Base Ten	2, 4, 5, 6				•		•	I			I	I	I	ı
Number and Operations - Fractions	4, 5, 6, 7	I	I	I	•	•	•	I			I	I	I	ı
Measurement and Data	2, 3, 4, 5, 6	•	•	•	•	•	•	I			-	I	I	ı
Geometry	2, 3, 4, 5	•	•				•				-	I	I	1
Ratios and Proportional Relationships	2	I	I	I	I	I	I	•			-	I	I	ı
The Number System	4, 5, 6	I	I	I	I	I	I	•			-	I	I	1
Statistics and Probability	2	I	I	I	I	I	I	•			-	I	I	ı
Number and Quantity														
Quantities	2	I	I	I	I	I	I	I	I	I	•	•	•	•
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# Educational Standards Supported (continued)

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	Modules	K	1	2	3	4	5	6	7	8	6	10	11	12
1. Overarching Nutrition Competency: Essential Nutrition Concepts	cy: Essential Nut	rition Co	- 1	All yout	All youth will know the relationships among nutrition, physiology, and health.	now the	relation	ships an	nu guou	trition,	physio	ology, a	nd heal	th.
1a. Know the six nutrient groups and the functions.	3, 5	•		•	•	•	•	•	•	•	•	•	•	•
1b. Know nutrition and health guidelines.	4, 5, 6, 8	•	•	•	•	•	•	•			•	•	•	•
Ic. Know factors affecting energy balance.	2, 5, 6	•	•	•	•	•			•	•				
1d. Describe how nutritional needs vary throughout the life cycle.	5	•	•	•	•	•	•	•	•	•	•	•	•	•
1e. Identify the physiological processes in digestion, absorption, and metabolism of nutrients.	3, 5	•	•	•					•	•				
1f. Explain the influence of nutrition and physical activity on health.	2, 3, 5, 8	•	•	•	•	•	•	•						
1g. Know principles of handling (growing, harvesting, transporting, processing, storing, and preparing) foods for optimal food quality and safety.	œ	•	•	•	•	•	•	•	•	•	•	•	•	•
1h. Consider the interactions among nutrition science, ecosystems, agriculture, and social systems that affect health, including local, national, and global perspectives.	1, 2, 3	•	•	•	•	•	•	•	•	•	•	•	•	•
2. Overarching Nutrition Competency: Analyzing Nutrition Influences	cy: Analyzing Nu	trition In	Ifluences	(										
All youth will demonstrate the ability to analyze internal and external factors influencing food choices and health outcomes.	Ч	•	•	•	•	•	•	•	•	•	•	•	•	•
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Nutrition Education Competencies Supporte	encies Suppoi		d (continued	<u>a)</u>								-		
	Modules	K	1	2	3	4	5	6	7	8	6	10	11	12
3. Overarching Nutrition Competency: Accessing Valid	cy: Accessing Val		Nutrition Information	mation										
All youth will demonstrate the														
ability to access and analyze														
nutrition information, products,	2, 5, 6, 7	•	•	•	•	•	•	•	•	•	•	•	•	•
and services to analyze the accuracy														
and validity of nutrition claims.														
4. Overarching Nutrition Competency: Interpersonal Communication about Nutrition	cy: Interpersonal	Commur	nication	about N	utrition									
All youth will demonstrate	1													
the ability to use interpersonal	ſ													
communication skills to optimize							•	•						
food choices and health outcomes.														
5. Overarching Nutrition Competency: Decision Making	cy: Decision Mak	ing for N	utrition	g for Nutrition Choices										
All youth will demonstrate the														
ability to use decision-making skills	7 3 5 6 0													
to optimize food choices and health	2, J, J, U, O	•	•	•	•	•	•	•	•	•	•	•	•	•
outcomes.														
6. Overarching Nutrition Competency: Goal Setting for	cy: Goal Setting 1	or Nutrition	on											
All youth will demonstrate the														
ability to use goal-setting skills to	2, 3, 5, 6, 8		•	•	•	•	•	•	•	•	•	•	•	•
enhance nutrition and health.														
7. Overarching Nutrition Competency: Practicing Nutri	cy: Practicing Nu		hancing	tion-Enhancing Behaviors	ors									
All youth will demonstrate the														
ability to practice nutrition-related	7 7 E C O													
behaviors that reduce risk and	۵, ۵, ۵, ۵, ۵, ۵	•	•	•	•	•	•	•	•	•	•	•	•	•
promote health.														
8. Overarching Nutrition Competency: Nutrition Promotion	cy: Nutrition Pro	motion												
All youth will demonstrate the														
ability to promote and support a														
sustainable, nutritious food supply	1, 2, 3, 5, 8	•	•	•	•	•	•	•	•	•	•	•	•	•
and healthy lifestyles for families														
and communities.														
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### Module 8: Making Healthy Snacks

### **Background Information**

Now that youth have learned about strategies they can use to make healthy choices, they can apply them to choosing healthy snacks. For example:

- Understanding what **serving sizes** are and how to use them helps us compare different food items.
- Knowing the **MyPlate** recommendations based on age, gender, and physical activity level helps us make sure we are getting all the nutrients we need from all the food groups. Key MyPlate recommendations can guide us in making healthy snacks. These recommendations include: make half your plate fruits and vegetables, choose lowfat or fat-free dairy, make half your grains whole, and go lean with protein.

### Concepts and Vocabulary

- **Consumerism:** an economic strategy where **consumers** are encouraged to buy **goods** and services in increasing amounts.
- **MyPlate:** a nutrition guide developed by the United States Department of Agriculture (USDA). It illustrates the five food groups that are the building blocks for a healthy diet.

- Understanding how to read Nutrition Facts Labels allows us access to reliable information about the nutrients that are in snack foods. This label can help you choose snacks that are high in vitamins and minerals, and low in saturated fat and sodium.
- Additionally, understanding **consumerism** and the methods that marketing companies use to persuade us to choose their food products, we can apply our knowledge to make healthy choices and select foods that are best for us.

- Nutrition Facts Label: a label found on food packaging that displays nutritional content of food products.
- Serving Sizes: standard reference amounts that are set by the United States Food and Drug Administration (FDA).

### Life Skills

Cooperation, Communication, Critical Thinking, Healthy Life-Style Choices, Teamwork, Problem-Solving.

### Subject Links

English Language-Arts, Nutrition, Health

### Educational Standards Supported

*Discovering Healthy Choices* curriculum supports Next Generation Science Standards, Common Core State Standards, and California Nutrition Education Competencies. For specific details on standards and grade levels, please see page 9.

### Activity 8.1: Classroom Activity Getting Ready

- 1. Make copies of the *Healthy Snack Ingredient Cards* (Appendix 8A), one set for each group. Fold each of the cards along the dotted line so that the picture is on one side and the food label is on the other.
- 2. Make copies of the *MyPlate* handout (Appendix 8B), one for each group.
- 3. Organize the class into small groups of 3 to 4 youth.

**Facilitator Tip:** these can be the same groups that were formed in Lesson 1, Activity 1. By doing so, the youth may continue developing teamwork skills with the same group members.

4. Provide each group with one sheet of flip chart paper and markers to answer opening questions.

### **Opening Questions/Prompts**

Ask the youth to respond to each question/prompt below by recording them on the flip chart paper provided and sharing their ideas verbally.

- 1. Explain what you know about different nutrients.
- 2. Explain what you know about MyPlate recommendations.
- 3. Explain what you know about food labels.
- 4. Explain what you know about different factors that can influence our food choices.

### Procedure (Experiencing)

- 1. Provide each group with one set of the *Healthy Snack Ingredient Cards* and a copy of the *MyPlate* handout.
- 2. With the picture side up, ask the youth to organize the set of *Healthy Snack Ingredient Cards* according to the MyPlate food groups: fruits, vegetables, protein, dairy, and grains. Have them record how they organized their cards on the flip chart paper.
- 3. Ask each group to share how they organized their cards based on the MyPlate food groups.
- 4. Have the youth flip the cards over and categorize the foods based on the nutrient information displayed on the Nutrition Facts Label. Ask them to record on the flip chart paper which nutrients they used to reorganize their cards.
- 5. Ask each group to share how they organized their cards using the Nutrition Facts Label.
- 6. Ask each group to create what they think is a healthy snack, choosing from the foods on the *Healthy Snack Ingredient Cards.* Have the groups write their healthy snack choices on the flip chart paper.

**Time Required** 60 minutes

Suggested Groupings Small groups of 3 to 4 youth

### Materials Needed

(\*Materials provided in curriculum)

- Flip chart paper
- Markers or writing utensils
- \**Healthy Snack Ingredient Cards* (Appendix 8A)
- \**MyPlate* (Appendix 8B)

### Sharing, Processing, and Generalizing

- 1. Have the youth share what they chose for their healthy snack and explain how they went about making that choice.
- 2. Follow the lines of thinking developed through youths' thoughts, observations, and questions as they share. If necessary, use more targeted questions/prompts:
  - Explain how you went about building your healthy snack.
  - Explain how you determined what makes a healthy snack.
  - Explain why you think it is important to choose healthy snacks.

### Concept and Term Discovery/Introduction

Make sure youth understand how to use reliable nutrition resources to choose healthy snacks, including MyPlate recommendations and Nutrition Facts Labels. Youth should also understand that when making healthy snacks, fruits and veggies, whole grains, lean protein, and fat-free or low-fat (1%) dairy are recommended. Additionally, make sure that key vocabulary terms are either discovered by the youth or introduced to them: **serving sizes**, **MyPlate, Nutrition Facts Labels**, and **consumerism**.

### Activity 8.2: Garden Concept Application Getting Ready

- 1. Check the garden to find out if there are vegetables that are ready to be harvested for "finger salads."
- 2. Purchase a variety of additional ingredients for "finger salads" (using *Finger Salad Recipe*, Appendix 8C).
- 3. Organize the class into small groups of 3 to 4 youth.

**Facilitator Tip:** These can be the same groups that were formed in Lesson 1, Activity 1. By doing so, the youth may continue developing teamwork skills with the same group members.

4. Provide each group with one sheet of flip chart paper and markers to answer opening questions.

### **Opening Questions/Prompts**

### Time Required 60 minutes

### Materials Needed

(\*Materials provided in curriculum)

- Flip chart paper
- Markers or writing utensils
- *\*Finger Salad Recipe* (Appendix 8C)
- Ingredients for finger salads from the \**Finger Salad Recipe* (Appendix 8C)
- Containers (if harvesting vegetables)
- Knives, forks, plates, napkins, mixing bowls
- Adult volunteers

Ask the youth to respond to each question/prompt below by recording them on the flip chart paper provided and sharing their ideas verbally.

- 1. Describe what you think is a healthy snack.
- 2. Explain what you know about making healthy snacks.

### Procedure (Experiencing)

- 1. Ask the groups to go out to their garden plots and harvest vegetables for finger salads.
- 2. Collect all the vegetables that were harvested and prepare them for finger salads.
- 3. Have adult volunteers help wash, dry, peel, and cut the vegetables as needed.
- 4. Arrange all of the ingredients as a buffet so that the children can choose which ingredients to include in their finger salads.
- 5. Explain to the youth that they will be building finger salads, a finger-food that can be eaten with your hands. Explain that they will use a large lettuce or cabbage leaf to hold the ingredients, and they will be able to choose the ingredients they want for their own finger salad.
- 6. Ask the youth to use the ingredients available to build their finger salad.

**Facilitator Tip:** Take a picture of each child with their finger salad. These pictures can then be printed and displayed in the classroom or cafeteria to reinforce healthy choices.

- 7. Tell the children they can eat their finger salads.
- 8. After the youth have eaten their finger salads, have each group create an advertisement for finger salads. Explain they may create any form of advertisement, including: acting out a television commercial, making a poster, or writing a jingle.

**Facilitator Tip:** if you previously took pictures of the finger salads, the pictures may be used to create advertisements.

### Sharing, Processing, and Generalizing

- 1. Have each group share their advertisements for finger salads.
- 2. Follow the lines of thinking developed through youths' thoughts, observations, and questions as they share. If necessary, use more targeted questions/prompts:
  - Explain how you went about choosing the ingredients for your finger salad.
  - Explain which foods groups were represented in your finger salad.
  - Explain what it was about your finger salad that made it a healthy snack.
  - Explain how you went about creating your advertisement.
  - Explain how you think other youth could be inspired to make healthy snacks.

### Concept and Term Discovery/Introduction

Youth should understand how to use the skills they have learned to make their own healthy snacks.

### Activity 8.3: Goal Setting Application Getting Ready

• Make copies of the *Goal Setting* worksheet (Appendix 8D), one for each youth.

### Procedure (Experiencing)

- 1. Provide a copy of the *Goal Setting* handout to each youth.
- Ask the youth to take home the *Goal Setting* sheet (Appendix 8D) and complete it with their families. They will answer the following questions:
  - What are some things you can do to make healthy choices?
  - What are some things your family can do to accomplish this goal?
- 3. When the youth return with the completed sheet, ask the youth to share the goals they set for themselves and for their families to meet the recommendation.

### Activity 8.4: Home Application

### <u>Getting Ready</u>

• Make copies of the *Making Healthy Snacks at Home* worksheet (Appendix 8E), one for each youth.

### Procedure (Experiencing)

- 1. Provide a copy of the *Making Healthy Snacks at Home* handout to each youth.
- 2. Ask the youth to take home the *Making Healthy Snacks at Home* worksheet and complete it with their families. Explain that they will make a healthy snack for their family. Ask them to record the recipe for the snack they made and how they went about choosing the snack.
- 3. When the youth return, ask the youth to share their recipes for a healthy snack and how they went about choosing the snack.

**Facilitator Tip:** The recipes of healthy snacks the youth make can be compiled into a classroom cookbook for healthy snacks.

### **Time Required** 5 to 10 minutes

### Materials Needed

(\*Materials provided in curriculum)

• Goal Setting (Appendix 8D)

**Time Required** 5 to 10 minutes

Materials Needed

- (\*Materials provided in curriculum)
- Making Healthy Snacks at Home (Appendix 8E)

**APPENDIX 8A: Healthy Snack Ingredient Cards** 

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**Beef Jerkey Stick** 



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**Beef Jerkey Stick** 

## **Nutrition Facts**

per container	
serving	
ser	•

1 stick (20g) Serving Size

Amount per serving Calories

% Daily			
	<b>otal Fat</b> 10g	Saturated Fat 4g	

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13% 20%

Value\*

~ ~

Cholesterol 27mg Trans Fat 0g

**Total Carbohydrate** 1g Sodium 306mg

Dietary Fiber 0g

13% **%6** 

%0 %0

> Includes 0g Added Sugars Total Sugars 0g

Protein 4g

Vitamin D 0mcg

Calcium 20mg

Iron 1mg

Potassium 51mg

4% % The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

% %

%

**Breakfast Cereal** 

<

45% 10% %0 5% %0 % Daily Value\* %0 %0 %6 3% The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories **Nutrition Facts** % **4**% 1 Cup (28g) 100 **Breakfast Cereal** Includes 2g Added Sugars a day is used for general nutrition advice. 12 servings per container Total Carbohydrate 24g Amount per serving Calories Saturated Fat 0g Cholesterol 0mg Dietary Fiber 1g Total Sugars 3g Sodium 204mg Potassium 47mg Vitamin D 1mcg Trans Fat 0g Serving Size Total Fat 0g Calcium 1mg Protein 2g Iron 8mg



**APPENDIX 8A: Healthy Snack Ingredient Cards** 

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**Strawberry Yogurt** 



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**Strawberry Yogurt** 

<b>Nutrition Facts</b>	<u>cts</u>
1 serving per container Serving Size 6 ounce	r ounces (170g)
Amount per serving Calories	150
% Daily	y Value*
Total Fat 1.5g	7%
Saturated Fat 0g	%0
Trans Fat 0g	
Cholesterol 5mg	%0
Sodium 105mg	5%
Total Carbohydrate 29g	11%
Dietary Fiber 0g	%0
Total Sugars 24g	
Includes 10g Added Sugars	20%
Protein 4g	
Vitamin D 80mcg	5%
Calcium 201mg	15%
Iron Omg	%0
Potassium 240mg	5%
The % Daily Value (DV) tells you how much a nutritent in a serving of food contributes to a daily diet. 2,000 calorie: a day is used for general nutrition advice.	h a nutrient in 2,000 calories





Facts	1 cup (148g)	27	% Daily Value*	%0	%0		%0	%0	2%	7%	
Nutrition	Serving Size	Amount per serving Calories		Total Fat 0g	Saturated Fat 0g	Trans Fat 0g	Cholesterol Omg	Sodium 7mg	<b>Total Carbohydrate</b> 6g	Dietary Fiber 2g	Total Sugars 4g

**Cherry Tomatoes** 

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%

Includes 0g Added Sugars

Protein 1g

8%

Potassium 353mg

Iron 0mg

 The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrifion advice.

1%

Vitamin D 0mcg Calcium 15mg **APPENDIX 8A: Healthy Snack Ingredient Cards** 

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Chocolate Milk (1%)

|Ĕ| |

Chocolate Milk (1%)



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### Nutrition Facts Serving Size 1 cup (250g) Amount per serving

Amount per serving Calories 155 \* Daily Value

Total Fat 3g Saturated Fat 1g *Trans* Fat 0g

4%

5%

Cholesterol 12mg Sodium 162mg Total Carbohydrate 25g

Total Carbohydrate 25g Dietary Fiber 0g

%**6** 

%0

Total Sugars 25g Includes 13g Added Sugars Protein 7g

26%

Vitamin D 3mcg Calcium 322mg

Iron 1mg

15% 21% 6% Potassium 430mg 9% \* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

<mark>7%</mark>

Milk (1%)

**Milk (1%)** 

Niitivi Eoc	
D	
Serving Size 1 cup (	cup (244g)
Amount per serving Calories 1	02
% Daily	Value*
Total Fat 2g	3%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 12mg	4%
Sodium 107mg	5%
Total Carbohydrate 12g	4%
Dietary Fiber 0g	%0
Total Sugars 13g	
Includes 0g Added Sugars	%0
Protein 8g	
Vitamin D 3mcg	15%
Calcium 305mg	23%
Iron 0mg	%0
Potassium 366mg	8%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	utrient in 0 calories



<



Whole Wheat Crackers

## **Nutrition Facts**

8 servings per box Serving Size

6 crackers (28g)

Amount per serving Calories

3

% Daily Value\* Total Fat 4g

5% 3%

> Saturated Fat 1g Trans Fat 0g

> > Fold Here

Cholesterol Omg Sodium 197mg

**Fotal Carbohydrate** 19g

Dietary Fiber 3g

10%

%6 7%

%0

%0

Total Sugars 0g

Includes 0g Added Sugars Protein 3g

Vitamin D 0mcg

%

%

Calcium 10mg Iron 1mg

%9

%

The % Daily Value (DV) tells you how much a nutrient in Potassium 27mg

a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Module 8: Making Healthy Snacks



**Plain Crackers** 

**Plain Crackers** 

## **Nutrition Facts**

8 servings per box

6 crackers (28g) Serving Size

Amount per serving

Calories

5

% Daily Value\*

Saturated Fat 0g Total Fat 2g

2%

%0

Cholesterol Omg Trans Fat 0g

Sodium 168mg

Total Carbohydrate 13g Dietary Fiber 1g

5%

7%

%0

2%

Includes 0g Added Sugars Total Sugars 0g

%

Protein 2g

Vitamin D 0mcg Calcium 3mg

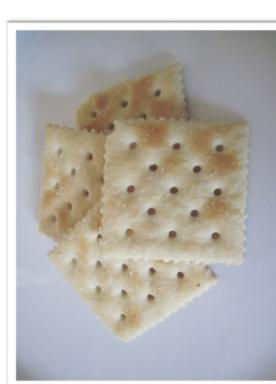
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%

Potassium 27mg Iron 1mg

1% \* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

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Module 8: Making Healthy Snacks

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> Chocolate Chip Cookies

> > **Chocolate Chip Cookies**

icts	3 cookies (34g)	153	% Daily Value*	8%	10%		%0	<b>6</b> %	8%	4%	
<b>Nutrition Facts</b>	6 servings per box Serving Size 3 cook	Amount per serving Calories	% Da	Total Fat 6g	Saturated Fat 2g	Trans Fat 0g	Cholesterol Omg	Sodium 142mg	<b>Total Carbohydrate</b> 23g	Dietary Fiber 1g	Total Sugars 11g

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20%

Includes 10g Added Sugars

Protein 2g

0% 6% 1%

Vitamin D 0mcg Calcium 0mg The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

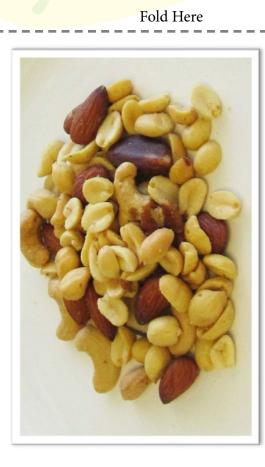
Potassium 46mg

Iron 1mg

**Mixed Nuts** 

Nutrition Fa	Facts
	1 ounce (28g)
Calories 17	70
% Dail	Daily Value*
Total Fat 15g	19%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol Omg	%0
Sodium 100mg	4%
Total Carbohydrate 6g	2%
Dietary Fiber 2g	7%
Total Sugars 1g	
Includes 0g Added Sugars	%0
Protein 6g	
Vitamin D 0mcg	% <b>0</b>
Calcium 25mg	2%
Iron 1mg	6%
Potassium 182mg	4%
The % Daily Value (DV) tells you how much a nutrient in a serving of tood contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	nutrient in 000 calories

**Mixed Nuts** 



**Potato Chips** 

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## **Nutrition Facts**

**Potato Chips** 

2 servings per container Serving Size 1 ou

1 ounce (28g)

Amount per serving Calories

150	% Daily Value*	13%	50%
Calories		Total Fat 10g	Saturated Fat 10g

7% %9 %0 16g **Total Carbohydrate** Cholesterol Omg Sodium 150mg Trans Fat 0g

Dietary Fiber 1g Total Sugars 1g

Includes 0g Added Sugars Protein 2g

%0

4%

Vitamin D 0mcg Calcium 6mg

8 8

Iron 0mg

%0

The % Daily Value (DV) tells you how much a nutrient in Potassium 335mg

a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

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Fruit Cup

Fruit Cup

## **Nutrition Facts**

1 cup (242g) 1 serving per container Serving Size 1

Amount per serving

204

Calories

% Daily Value\* Saturated Fat 0g Total Fat 0g

%0 %

> Cholesterol Omg Trans Fat 0g

% %0 % 9 7%

Sodium 15mg

Total Carbohydrate 36g Dietary Fiber 2g

Includes 10g Added Sugars Total Sugars 33g

20%

Protein 1g

Vitamin D 0mcg Calcium 15mg Iron 1mg

% 1% 5% %9

The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice. Potassium 215mg

Fold Here



**Peanut Butter** 

Nutrition	Facts
Serving Size	2 tbsp (32g)
Amount per serving <b>Calories</b>	191
0.	% Daily Value*
otal Fat 16g	21%
Saturated Fat 3g	15%
Trans Fat 0g	
Cholesterol Omg	%0
Sodium 136mg	<b>6%</b>
otal Carbohydrate 7g	3%
Dietary Fiber 2g	6%
Total Sugars 3g	
Includes 0g Added Sugars	ars 0%
<b>Protein</b> 7g	
Vitamin D 0mcg	%0
Calcium 16mg	1%
Iron 1mg	3%
Potassium 179mg	4%
The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a dav is used for general nutrition advice	much a nutrient in diet. 2,000 calories ice
a day is used for general nutrition advice	Ce.

Fold Here

**Peanut Butter** 



Strawberries

Strawberries

Nutrition	Facts
Serving Size	1 cup (152g)
Amount per serving Calories	50
	% Daily Value*
Total Fat 0g	%0
Saturated Fat 0g	%0
Trans Fat 0g	
Cholesterol Omg	%0
Sodium 2mg	%0
<b>Total Carbohydrate</b> 12g	
Dietary Fiber 3g	10%
Total Sugars 7g	
Includes Og Added Sugars	ugars 0%
Protein 1g	
Vitamin D 0mcg	0%
Calcium 24mg	2%
Iron 1mg	5%
Potassium 233mg	4%

<text>

<sup>-</sup> The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice. **APPENDIX 8A: Healthy Snack Ingredient Cards** 

 $\triangleleft$ 

 Sugar Snap Peas

 Nutrition Facts

 Serving Size
 1 cup (100g)

 Serving Size
 1 cup (200g)

 Mount per serving
 30

 Calories
 % Daily Value\*

 Total Fat 0g
 % Daily Value\*

% Daily Value\*% Daily Value\*Total Fat 0g0%Saturated Fat 0g0%Trans Fat 0g0%Trans Fat 0g0%Cholesterol 0mg0%Cholesterol 0mg0%Sodium 6mg0%Total Carbohydrate 7g3%Dietary Fiber 3g10%Total Sugars 3g0

1 otal Sugars 3g Includes 0g Added Sugars Protein 2g

%

Vittamin D 0mcg Calcium 37mg Iron 1mg

3%

5%

Potassium 211mg 4% \* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

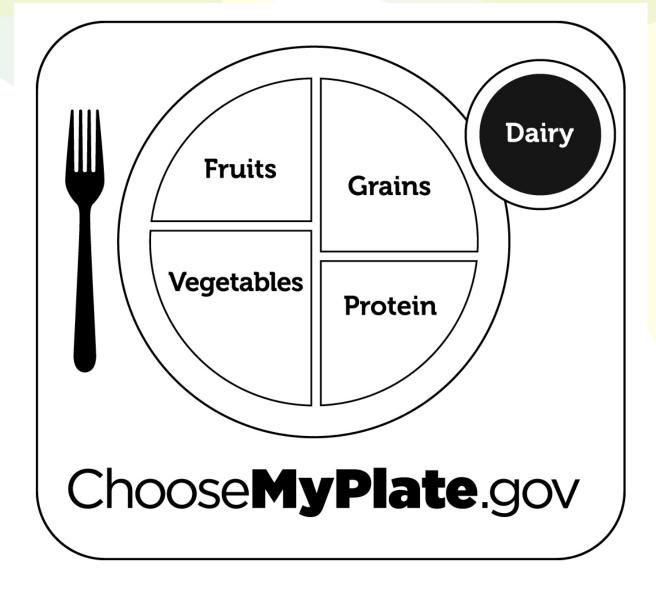
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Sugar Snap Peas



Module 8: Making Healthy Snacks

### APPENDIX 8B: My Plate



### **APPENDIX 8C: Finger Salad Recipe**

### **Finger Salad Recipe**

Finger salads are small salads you can eat with your fingers!

### Ingredients

Choose at least one large-leaf green, several vegetables, and additional toppings from the recommended ingredients in the list below.

Large-leaf greens	Vegetables	Additional toppings
red leaf lettuce	black beans (canned) drained and rinsed	cheese: cheddar, blue cheese, feta, jack
green leaf lettuce	broccoli, cut into small florets	nuts: peanuts, walnuts, sunflower seeds, pecans
romaine lettuce	carrots, peeled and chopped	olives
Swiss chard	corn, kernels cut from the cob	herbs: basil, cilantro, mint, parsley
cabbage	cucumber, chopped	salad dressing
	fresh peas, separated from their pods	salsa
	green beans, cut into small pieces	
	green onions, chopped	
	soybeans, separated from their pods	
	spinach	
	radishes, sliced	
	red bell pepper, chopped	
	sugar snap peas, cut into small pieces	
	tomatoes, chopped	

Place a large leaf of lettuce, Swiss chard, or cabbage on a small plate. Fill the large leaf with desired ingredients including other vegetables and additional toppings. This salad can be eaten with your hands like a taco or a lettuce wrap.

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### **APPENDIX 8D: Goal Setting**

### **Setting Goals for Healthy Choices**

What are some things you can do to make it easier to make healthy choices?

What are some things your family can do to accomplish this goal?



### **APPENDIX 8E: Making Healthy Snacks at Home**

### Making Healthy Snacks at Home

Use what you have learned to create a recipe for a healthy snack and make it for your family. Then answer the questions below.

1. Record the recipe for your healthy snack.

2. How did you go about choosing the ingredients for your healthy snack?

### Photo, Graphic, and Illustration Credits

### Cover

• Plant—https://www.flickr.com/photos/aresauburnphotos/2508019220

### Module 8: Making Healthy Snacks

- Food photos—Jessica (Dusti) Linnell
- Nutrition Facts labels—Hee Joo (Kristi) Kim and Kelly Ho

### **References**

### **Module 8: Making Healthy Snacks**

USDA Nutrient Database. 2016. USDA Food Composition Database website, https://ndb.nal.usda.gov/ndb/.

