A Pyramid of Snacks

Patricia F. Thonney
Cornell Cooperative Extension
Acknowledgments

A Pyramid of Snacks is one in a series of food publications to help children ages 9–12 acquire food skills and appreciate the science of cooking. The goals of the Cooking Up Fun! initiative are to

- increase life skills related to food preparation.
- model practices that reflect the Dietary Guidelines and the Food Guide Pyramid.
- promote foods produced in New York State.
- expand opportunities for experiential learning.
- develop understanding of the science of cooking.
- have fun!

Special appreciation is extended to all Cornell Cooperative Extension educators who are involved in the Cooking Up Fun! initiative and who guided the development of the first publication, A Pyramid of Snacks.

Author: Patricia F. Thonney, Extension Associate, Division of Nutritional Sciences, Cornell University
Editor: Trudie Calvert, Media and Technology Services, Cornell University
Designer: Dennis F. Kulis, Media and Technology Services, Cornell University

This publication is issued to further Cooperative Extension work mandated by acts of Congress of May 8 and June 30, 1914. It was produced with the cooperation of the U.S. Department of Agriculture; Cornell Cooperative Extension; and College of Agriculture and Life Sciences, College of Human Ecology, and College of Veterinary Medicine at Cornell University. Cornell Cooperative Extension provides equal program and employment opportunities.
D. Merrill Ewert, Director.
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A Pyramid of Snacks is arranged to allow flexibility in planning and delivering programs in a variety of settings for children ages 9 to 12. The publication consists of the following parts:

- **About This Teaching Guide** states the philosophy and goals of the teaching material and how to use it effectively.
- **Guidance for Successful Cooking Sessions** lists some considerations and tools for planning, teaching, and evaluating a series of cooking sessions.
- **Recipes** provides 16 recipes to be copied for the children’s use.
- **Food Activities** are a collection of games, science experiments, children’s storybooks, and other activities that support the cooking experiences. They can be used for planning group activities or reproduced for the children’s own use.
- **Background Information** provides additional information about nutrition and cooking. Use these pages for reference material or reproduce them for the children’s own use.

**Child-Focused Learning**

A Pyramid of Snacks is a collection of recipes and food activities for use with children ages 9 to 12. It is especially appropriate for informal education settings—4-H clubs, EFNEP, summer camps, scouts, and other community programs—that provide the time and freedom for personal exploration and repetition of activities.

A Pyramid of Snacks challenges you to focus on the process of cooking. That means saving most of the nutrition information you think children should know for later. This strategy adopts principles found in the Learning Cycle, a teaching method that engages children in active, investigative learning. A key element of this teaching strategy is giving children an opportunity to experience a concept before flooding them with vocabulary or information about the concept. In this way, the adult assumes the role of coach or facilitator rather than of “expert” teacher.

We encourage you to involve the children in planning the cooking sessions. That’s why the material is not organized into a sequential lesson format. The children will have more rewarding experiences if you take time to tailor the cooking sessions to their interests. The sample Planning Sheet (p. 15) shows one way to organize 6 of the 16 recipes into a cooking series and suggests connections to other food activities.

As important as any information you provide is the enthusiasm you show for cooking. Remember to relax and have fun!

**A Scientist in the Kitchen**

Emphasizing the process of cooking provides an excellent opportunity to promote the science of cooking. A kitchen makes a wonderful science laboratory for children. From physical changes to chemical reactions, much happens when you prepare food for eating.

While cooking, you use the science of chemistry to mix and heat ingredients to make something new. You explore biology when you examine vegetables, grains, and other products from nature. And you learn the science of nutrition when you talk about how foods you eat affect your body.

Much can be learned from the scientific process itself. Skillful scientists know the equipment they use and how to handle it safely. They make and follow a plan. They learn to choose and organize supplies. They gain confidence and an interest in trying new things. They observe, ask questions, and wonder what would happen “if I didn’t peel the apples; if I used carrots instead of celery; if I left out the salt.” Unlike most science investigations, in cooking, tasting is essential for evaluating results. The sensory nature of cooking—seeing, touching, smelling,
hearing, tasting—is very engaging and offers many opportunities for conversation.

Try including simple science experiments with the cooking experiences. Have the children select and try at least two experiments from the section “Science through the Pyramid” (pp. 53–58). Then encourage them to create their own experiments.

Skills to Last a Lifetime

The process of cooking involves both science skills and life skills with many overlapping characteristics. Two charts—“Overview of Cooking Skills” and “Overview of Food and Nutrition Skills” (pp. 13–14)—detail specific skills that can be practiced and learned from each of the 16 recipes in this collection.

Yet children can gain much more from cooking experiences than these specific skills. Every aspect of cooking—from choosing ingredients to serving the food—.touches on such life skills as managing resources, making decisions, and solving problems. Cooking also has an artistic or creative aspect that allows people to express individuality and cultural connections. It also provides the opportunity for the “I can do it!” feelings of accomplishment that are so important to children and youth of all ages and stages of development. Certainly, any adult who takes the time to teach the process of cooking teaches many skills that help children become informed and caring adults.

Learning cooking skills at an early age may play an important role in promoting overall health and well-being. As children gain experience handling foods, they can prepare more snacks and meals for family, friends, and personal enjoyment. The more familiar children become with a variety of foods and the preparation of them, the more likely they may be to adopt healthful eating practices now and in the future.

The Food Guide Pyramid

Recipes in A Pyramid of Snacks were selected to be healthy and easy for young, beginning cooks to make. Whether or not you spend much time talking about the Food Guide Pyramid, you will be teaching it by example. Make the conversations focus on the children by letting their ideas and questions determine what information you provide.

The recipes in A Pyramid of Snacks are intended to allow flexibility in your teaching. You can introduce each part of the Food Guide Pyramid with a different recipe. Or you can emphasize selected parts such as fruits and vegetables. You can show variations in fat content by selection of ingredients and relate that back

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The Process of Cooking

**Social and Emotional Development**
- Self-confidence and independence
- Cooperating and sharing
- Cultural awareness

**Physical Development**
- Fine and gross motor skills
- Healthy eating and nutrition

**Cognitive Development**
- Language skills
- Science process skills
- Mathematical skills
- Food and nutrition skills

**Creative Development**
- Making creative choices

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A Pyramid of Snacks, Cornell Cooperative Extension, Division of Nutritional Sciences, Cornell University. 1998
to the symbols throughout the Food Guide Pyramid. You can talk about limiting, yet not avoiding, higher fat snacks such as cookies.

You can design a variety of cooking series to meet different teaching objectives related to the Food Guide Pyramid. It’s also okay to choose an aspect of the cooking process other than the Food Guide Pyramid or nutrition for structuring the cooking experiences. You might choose recipes that allow children to master certain techniques such as handling knives safely or ones that represent different cultural aspects of foods. In such cases, nutrition messages may be secondary objectives.
Guidance for Successful Cooking Sessions

Organizing Cooking Stations
A first step in organizing cooking activities for children is knowing your work environment and any special needs of the children. Individual work stations are ideal for experiential learning but may not be feasible.

Three ways to organize cooking stations are described. Which works best for your teaching situation? What other possibilities could be considered?

**Individually**
Individual work stations ensure that each child gets to manipulate ingredients and equipment and practice all steps of the cooking process. Many children will benefit from the opportunity to work independently. This system works best if you have
- a small group of children (one to four).
- adequate space to spread out.
- multiple sets of cooking tools.
- enough ingredients.
- children capable of working independently.
- the ability to supervise several stations.

If you choose an option other than individual cooking stations, encourage children to do the cooking activity again at home with adult supervision or provide another time in your program for them to practice the skills.

**Cooking Buddies**
This strategy is similar to using individual work stations and can be a good way for children to master skills. Many children enjoy working with a partner and are able to share tasks without difficulty. This system works best if you have
- a small to medium-sized group of children (four to eight).
- an even number of children.
- children who enjoy working together.
- adequate space to spread out.
- multiple sets of cooking tools.
- enough ingredients.
- the ability to supervise several stations and ensure that one “buddy” isn’t dominating.

**Group Cooking**
This approach promotes cooperative learning skills, but it is the least desirable for teaching cooking skills. It is more like a “demonstration” in which tasks are divided among several children. Each child usually spends more time watching and waiting for a turn than actually doing. You might choose this approach if you have
- a medium to large group of children (six to twelve).
- limited space.
- limited time.
- limited equipment and ingredients.
- inability to supervise multiple work stations.
- exhausted the possibilities for breaking into smaller groups.
Selecting Recipes

Whether or not you spend much time talking about nutrition while using A Pyramid of Snacks, you will be modeling healthy food choices for children. Each recipe reinforces principles of the Dietary Guidelines and the Food Guide Pyramid. The recipes included here are just a few of the many possibilities.

Nutrition is only one of many criteria to consider when selecting recipes for children who are learning to cook. In addition, you will want to choose recipes that

- use low-cost ingredients.
- use readily available ingredients.
- require only basic tools and equipment.
- have easy-to-follow instructions.
- provide the chance to practice basic preparation skills.
- require limited adult assistance.
- are easy to prepare and clean up.
- teach at least one concept from the Dietary Guidelines.
- promote locally produced foods.
- increase experiences with a variety of foods.
- reflect a variety of cultural contexts.
- are fun to make.

You may have other ideas from your own experiences to add to this list.

Each recipe sheet lists ingredients, possible substitutions, equipment, and step-by-step directions. Basic cooking skills are listed in the chart “Overview of Cooking Skills” (p. 13). The recipes at Skill Level 1 develop skills in cutting and combining foods. They require safe handling of sharp knives, a grater, a can opener, and a blender. Recipes at Skill Level 2 require skills in operating appliances such as an oven, stove-top burner, and microwave oven, and several require more manipulation of equipment and ingredients.

Consider this collection of recipes a guide that should be expanded to reflect your children’s interests, experiences, and cultural contexts. Of course, your own experiences and interests are important to consider in the planning process.

Recipes at Skill Level 1 (assembling, cutting)
- Confetti Slaw
- Fruit Yogurt Pops
- Lemonade
- Pyramid Kabobs
- Rainbow Fruit Salad
- Tuna Pick Pockets
- Veggies and Dip to Go

Recipes at Skill Level 2 (using appliances)
- Apple Cinnamon Toast
- Cheese Quesadilla
- Gardener’s Salad
- Hot Chocolate
- Oatmeal Raisin Cookies
- Oven Fries
- Pyramid Pockets
- Rice-Crusted Pizza
- Tortilla Chips and Bean Dip

Promoting Experiential Learning

The recipes are not organized in a sequential lesson plan format. We want to encourage you to include the children in choosing which recipes to prepare or which variations of recipes. Encourage them to collect, share, and exchange other recipes. The form “Recipe Selection” (p. 19) can be reproduced as a worksheet to involve the children in choosing recipes for one or more cooking series.

Each group of children has its own personality and each teaching situation its own constraints. The aim of A Pyramid of Snacks is to help you create an individualized cooking series, emphasizing experiential learning.

One important element of this process is to involve the children in planning. A second is to begin by doing, followed by talking about the experiences and concepts. This teaching strategy adopts principles found in the
Learning Cycle, a method that engages children in active, investigative learning. Both of these elements require a flexible style of lesson plan.

Children should also be encouraged to record and evaluate their work. The “Record Sheet” (pp. 23–24) can be used for both planning the activities and recording progress.

**Using the Planning Sheet**

The “Planning Sheet” (p. 15) shows one possible sequence of recipes. The first column lists the recipes. The second column corresponds to information on the chart “Overview of Cooking Skills” (p. 13), and the third column corresponds to the chart “Overview of Food and Nutrition Skills” (p. 14). These are the skills that could be developed or learned in the cooking experiences. They also reflect concepts conveyed by the recipes, but don’t expect to cover all of them for each recipe. Be selective and let the children’s interest guide the conversation.

The example sequence uses two Level 1 recipes followed by two Level 2 recipes that repeat many of the same cooking skills. It’s a good idea to allow children opportunities to repeat and practice new skills such as handling a sharp knife or using an oven. The sequence also allows for conversation about all parts of the Food Guide Pyramid. It uses recipes that fit only one part of the pyramid and others that fit two or more.

The third column on the sample “Planning Sheet” lists a selection from the activity sheets, pp. 45–62. It’s often useful to use a variety of activities in any one session. For example, you might warm up with a game and end with a story. If the recipe requires waiting time, that could be the perfect opportunity to include a science experiment. In sessions that last from one and a half to two hours there is enough time to combine several activities without overwhelming the children with too much planned activity. Remember that cooking sessions must include time for organizing and cleaning up workstations.

It’s okay to focus on the cooking skills and limit the conversation related to food and nutrition skills. In some situations, it may be more appropriate to emphasize food and nutrition skills in a second series, after the children gain confidence handling the food and equipment, or if their time together is limited.

Another possibility is to alternate actual food preparation with other activities. Consider using the first session to plan the series together and to provide an overview of basic kitchen and food safety; see “A Cook’s Guide to Cleanliness” (p. 71). Take your cues from the children’s interests and skills when deciding just how much activity and information to pack into any one session.

**Using the Record Sheet**

The “Record Sheet” (pp. 23–24) is for the children to record the activities completed and their progress on both cooking and nutrition skills. Suggested goals are indicated for each type of activity.

Encourage the children to continue work on their own with their families by duplicating recipe and activity sheets.

The first table lists all the recipes and provides space for adding more. The second table lists all of the activities. The storybooks from “Children’s Storybooks” (pp. 61–62) are not listed, but reading to younger children is included on the sheet “12 Things Kids Can Do to Learn More about Food” (pp. 59–60).

On the second page of the “Record Sheet” you can check off progress on individual skills. Two or more skills are covered in several of the recipes. Space is provided to list additional skills.

**Ensuring Safety in the Kitchen**

Safety is important in any cooking activity. Sharp knives, electrical appliances, ovens, and hot foods make kitchens the source of many home accidents. Adequate adult supervision is essential for all cooking sessions.

When encouraging children to repeat the activities at home, always stress the importance of getting permission from an adult. An adult should always be in the house, if not in the kitchen, when children are cooking.
Another aspect of safety is cleanliness. The first step before beginning any kitchen activity should be to wash hands thoroughly. Too often germs that can cause infections and disease are transmitted through improperly handled foods. Carefully washing and rewashing hands is not the only precaution for keeping food safe to eat, but it is a major one. See “A Cook's Guide to Cleanliness” (p. 71).

Promoting Fun and Well-Being

Cooking is much more than learning how to prepare foods. It is a wonderful vehicle for self-expression and social interaction. Each child has different abilities, skills, and knowledge of foods.

Here are some things you can do to make cooking a rewarding experience for each child:

- Give children opportunities to repeat experiences, to practice skills, and to explore ideas that interest them.
- Allow children to do as much as possible by themselves.
- Monitor frustration levels and intervene if needed, but allow children the time and space they need to learn new skills.
- Recognize children for participating and for progress toward mastering skills.
- Offer lots of encouragement.
- Listen.
- Relax and show your enthusiasm for learning about food.
Charts and Forms to Plan and Evaluate Cooking Sessions
# Overview of Cooking Skills

## Skill Level 1

<table>
<thead>
<tr>
<th>Cooking Skill</th>
<th>Confetti Slaw</th>
<th>Fruit Yogurt Pops</th>
<th>Lemonade</th>
<th>Pyramid Kabobs</th>
<th>Rainbow Fruit Salad</th>
<th>Tuna Pick Pockets</th>
<th>Veggies and Dip to Go</th>
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<td>pineapple</td>
<td>tuna</td>
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<td></td>
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</tr>
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<td>cabbage</td>
<td>lemon</td>
<td>bread, cheese, meat, pepper</td>
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<td></td>
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<td></td>
</tr>
<tr>
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<td>carrot</td>
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<tr>
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<td>carrot</td>
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## Skill Level 2

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<th>Apple Cinnamon Toast</th>
<th>Cheese Quesadilla</th>
<th>Gardener’s Salad</th>
<th>Hot Chocolate</th>
<th>Oatmeal Raisin Cookies</th>
<th>Oven Fries</th>
<th>Pyramid Pockets</th>
<th>Rice–Crusted Pizza</th>
<th>Tortilla Chips and Bean Dip</th>
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<td>lettuce</td>
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<td>potatoes</td>
<td>grapes, egg</td>
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## Overview of Food and Nutrition Skills

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<th>SKILL LEVEL 2</th>
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<td>meat, poultry, fish, beans, nuts</td>
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### Limit fat

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<tr>
<td>Use low-fat yogurt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use skim, low-fat milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use lean meats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use water-packed tuna</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use fruit purees to replace fat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Limit sugar

| Use less sugar |               |               |
| Use fresh fruits or fruit juices |               |               |
| Use juice-packed fruits |               |               |

### Add fiber

| Use whole grains |               |               |
| Use fresh vegetables |               |               |
| Use fresh or dried fruits |               |               |
| Use whole wheat flour in baking |               |               |

### Try different products

| Try different varieties |               |               |
| Try different forms (canned, frozen) |               |               |
| Try different types of cheese |               |               |
| Try different types of breads, grains |               |               |

### Read labels

Choose New York State foods
# Planning Sheet
## A Sample Cooking Series

<table>
<thead>
<tr>
<th>Recipe Sequence</th>
<th>Cooking Skills</th>
<th>Food and Nutrition Skills</th>
<th>Additional Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainbow Fruit Salad</td>
<td>using knife (orange, kiwi)</td>
<td>try a variety of fruits</td>
<td>Game: What's for Snack?</td>
</tr>
<tr>
<td></td>
<td>opening can, draining</td>
<td>know locally grown fruits</td>
<td>Science: A Juicy Squeeze</td>
</tr>
<tr>
<td></td>
<td>liquid measuring</td>
<td>use juice-packed canned fruits</td>
<td>Reading: Tingo Tango Mango Tree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>read labels on canned fruits</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>add fiber with fresh fruits</td>
<td></td>
</tr>
<tr>
<td><strong>Session 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veggies and Dip to Go</td>
<td>rinsing foods (5 vegetables)</td>
<td>try a variety of vegetables</td>
<td>Game: Fruit and Veggie Pyramid Builder</td>
</tr>
<tr>
<td></td>
<td>using knife (5 vegetables)</td>
<td>know locally grown vegetables</td>
<td>Science: Celery Crunch</td>
</tr>
<tr>
<td></td>
<td>measuring</td>
<td>use low-fat yogurt to limit fat</td>
<td>Reading: Eating the Alphabet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>use yogurt to add calcium</td>
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<td>read labels on yogurt, salad dressings</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>add fiber with fresh vegetables</td>
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<tr>
<td><strong>Session 3</strong></td>
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<td></td>
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</tr>
<tr>
<td>Apple Cinnamon Toast</td>
<td>rinsing foods (apple)</td>
<td>know locally grown apples</td>
<td>Game: Lemonade</td>
</tr>
<tr>
<td></td>
<td>using knife (apple)</td>
<td>try different apple varieties</td>
<td>Science: Brown Apple or Not</td>
</tr>
<tr>
<td></td>
<td>measuring</td>
<td>add fiber with whole-grain breads</td>
<td>Reading: The Magic of Pomme</td>
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<tr>
<td></td>
<td>using oven, baking</td>
<td>try different types of breads</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>read bread labels</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>use less sugar</td>
<td></td>
</tr>
<tr>
<td><strong>Session 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oven Fries</td>
<td>using peeler (potatoes)</td>
<td>know locally grown potatoes</td>
<td>Game: Potato Relay</td>
</tr>
<tr>
<td></td>
<td>using knife (potatoes)</td>
<td>try different potato varieties</td>
<td>Science: One Potato, Two Potato</td>
</tr>
<tr>
<td></td>
<td>measuring</td>
<td>use less oil, margarine, butter</td>
<td>Reading: Latkes and Applesauce</td>
</tr>
<tr>
<td></td>
<td>using oven, baking</td>
<td>read labels on oil, margarine, butter</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>compare cost to frozen fries</td>
<td></td>
</tr>
<tr>
<td><strong>Session 5</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Pyramid Pockets</td>
<td>rinsing foods (grapes, sprouts)</td>
<td>try a variety of foods from the 5 groups</td>
<td>Game: Roll a Snack</td>
</tr>
<tr>
<td></td>
<td>using knife (grapes, egg)</td>
<td>know locally grown foods</td>
<td>Science: Calcium-Coated Egg</td>
</tr>
<tr>
<td></td>
<td>using grater (cheese)</td>
<td>limit fat with low-fat cheese</td>
<td>Reading: Potluck</td>
</tr>
<tr>
<td></td>
<td></td>
<td>read labels on packaged foods</td>
<td></td>
</tr>
<tr>
<td><strong>Session 6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oatmeal Raisin Cookies</td>
<td>measuring</td>
<td>use less fat in baking</td>
<td>Game: Catch the Dragon's Tail</td>
</tr>
<tr>
<td></td>
<td>cracking egg</td>
<td>use applesauce to replace some fat</td>
<td>Science: Attracting Iron</td>
</tr>
<tr>
<td></td>
<td>mixing batter</td>
<td>use less sugar in baking</td>
<td>Reading: Jalapeno Bagels</td>
</tr>
<tr>
<td></td>
<td>using oven, baking</td>
<td>add fiber with whole grains (oats)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>add fiber with dried fruits (raisins)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>know why to limit foods such as cookies</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>compare cost to packaged cookies</td>
<td></td>
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</tbody>
</table>
## Planning Sheet
Create Your Own Cooking Series

<table>
<thead>
<tr>
<th>Recipe Sequence</th>
<th>Cooking Skills</th>
<th>Food and Nutrition Skills</th>
<th>Additional Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>
# Recipe Selection

Listed here are 16 recipes for snacks. Check off 5 that you would like to try.

- [ ] Apple Cinnamon Toast
- [ ] Cheese Quesadilla
- [ ] Confetti Slaw
- [ ] Fruit Yogurt Pops
- [ ] Gardener’s Salad
- [ ] Hot Chocolate
- [ ] Lemonade
- [ ] Oatmeal Raisin Cookies
- [ ] Oven Fries
- [ ] Pyramid Kabobs
- [ ] Pyramid Pockets
- [ ] Rainbow Fruit Salad
- [ ] Rice-Crusted Pizza
- [ ] Tortilla Chips and Bean Dip
- [ ] Tuna Pick Pockets
- [ ] Veggies and Dip to Go

Of the snacks you prepared, which would you make again or recommend to a friend? List them here:

Look at the list again or look through magazines or cookbooks. What other snacks do you think would be fun to make? List them here:

---

A Pyramid of Snacks, Cornell Cooperative Extension, Division of Nutritional Sciences, Cornell University, 1998
### A Skill Checklist for Recipes

<table>
<thead>
<tr>
<th>Cooking Skills</th>
<th>What I did</th>
</tr>
</thead>
<tbody>
<tr>
<td>washing hands</td>
<td></td>
</tr>
<tr>
<td>rinsing foods</td>
<td></td>
</tr>
<tr>
<td>draining liquid</td>
<td></td>
</tr>
<tr>
<td>using knife</td>
<td></td>
</tr>
<tr>
<td>using peeler</td>
<td></td>
</tr>
<tr>
<td>using grater</td>
<td></td>
</tr>
<tr>
<td>using melon baller</td>
<td></td>
</tr>
<tr>
<td>using hand juicer</td>
<td></td>
</tr>
<tr>
<td>using can opener</td>
<td></td>
</tr>
<tr>
<td>measuring—teaspoons</td>
<td></td>
</tr>
<tr>
<td>measuring—dry cup</td>
<td></td>
</tr>
<tr>
<td>measuring—liquid cup</td>
<td></td>
</tr>
<tr>
<td>cracking egg</td>
<td></td>
</tr>
<tr>
<td>using blender</td>
<td></td>
</tr>
<tr>
<td>using oven</td>
<td></td>
</tr>
<tr>
<td>using burner</td>
<td></td>
</tr>
<tr>
<td>using microwave</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food and Nutrition Skills</th>
<th>What I did</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose a variety of foods</td>
<td></td>
</tr>
<tr>
<td>grains</td>
<td></td>
</tr>
<tr>
<td>fruit</td>
<td></td>
</tr>
<tr>
<td>vegetables</td>
<td></td>
</tr>
<tr>
<td>milk, yogurt, cheese</td>
<td></td>
</tr>
<tr>
<td>meat, poultry, fish, beans, nuts</td>
<td></td>
</tr>
<tr>
<td>Limit fat</td>
<td></td>
</tr>
<tr>
<td>use less fat</td>
<td></td>
</tr>
<tr>
<td>use low-fat cheese</td>
<td></td>
</tr>
<tr>
<td>use low-fat yogurt</td>
<td></td>
</tr>
<tr>
<td>use skim, low-fat milk</td>
<td></td>
</tr>
<tr>
<td>use lean meats</td>
<td></td>
</tr>
<tr>
<td>use water-packed tuna</td>
<td></td>
</tr>
<tr>
<td>use fruit purees to replace fat</td>
<td></td>
</tr>
<tr>
<td>Limit sugar</td>
<td></td>
</tr>
<tr>
<td>use less sugar</td>
<td></td>
</tr>
<tr>
<td>use fresh fruits or fruit juices</td>
<td></td>
</tr>
<tr>
<td>use juice-packed fruits</td>
<td></td>
</tr>
<tr>
<td>Add fiber</td>
<td></td>
</tr>
<tr>
<td>use whole grains</td>
<td></td>
</tr>
<tr>
<td>use fresh vegetables</td>
<td></td>
</tr>
<tr>
<td>use fresh or dried fruits</td>
<td></td>
</tr>
<tr>
<td>use whole wheat flour in baking</td>
<td></td>
</tr>
<tr>
<td>Try different products</td>
<td></td>
</tr>
<tr>
<td>try different varieties</td>
<td></td>
</tr>
<tr>
<td>try different forms (canned, frozen)</td>
<td></td>
</tr>
<tr>
<td>try different types of cheese</td>
<td></td>
</tr>
<tr>
<td>try different types of breads, grains</td>
<td></td>
</tr>
</tbody>
</table>

| Read labels                     |            |
| Choose New York State foods     |            |
## Record Sheet

### Check Your Progress

**Try at least 5 new recipes!**

<table>
<thead>
<tr>
<th>Recipes</th>
<th>Other Recipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Apple Cinnamon Toast</td>
<td>☐ Apple Cinnamon Toast</td>
</tr>
<tr>
<td>☐ Confetti Slaw</td>
<td>☐ Confetti Slaw</td>
</tr>
<tr>
<td>☐ Tortilla Chips and Bean Dip</td>
<td>☐ Tortilla Chips and Bean Dip</td>
</tr>
<tr>
<td>☐ Oven Fries</td>
<td>☐ Oven Fries</td>
</tr>
<tr>
<td>☐ Rainbow Fruit Salad</td>
<td>☐ Rainbow Fruit Salad</td>
</tr>
<tr>
<td>☐ Rice-Crusted Pizza</td>
<td>☐ Rice-Crusted Pizza</td>
</tr>
<tr>
<td>☐ Fruit Yogurt Pops</td>
<td>☐ Fruit Yogurt Pops</td>
</tr>
<tr>
<td>☐ Cheese Quesadilla</td>
<td>☐ Cheese Quesadilla</td>
</tr>
<tr>
<td>☐ Hot Chocolate</td>
<td>☐ Hot Chocolate</td>
</tr>
<tr>
<td>☐ Lemonade</td>
<td>☐ Lemonade</td>
</tr>
<tr>
<td>☐ Gardener's Salad</td>
<td>☐ Gardener's Salad</td>
</tr>
<tr>
<td>☐ Tuna Pick Pockets</td>
<td>☐ Tuna Pick Pockets</td>
</tr>
<tr>
<td>☐ Oatmeal Raisin Cookies</td>
<td>☐ Oatmeal Raisin Cookies</td>
</tr>
<tr>
<td>☐ Veggies and Dip to Go</td>
<td>☐ Veggies and Dip to Go</td>
</tr>
<tr>
<td>☐ Pyramid Pockets</td>
<td>☐ Pyramid Pockets</td>
</tr>
<tr>
<td>☐ Pyramid Kabobs</td>
<td>☐ Pyramid Kabobs</td>
</tr>
</tbody>
</table>

**I tried and would make these again!**

## Recipes

### Other Recipes

### Food Activities

<table>
<thead>
<tr>
<th>Games</th>
<th>Science experiments</th>
<th>12 Things Kids Can Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play at least 2 games. Teach one to someone else.</td>
<td>Do at least 2 experiments. Show one to someone else.</td>
<td>Choose and do at least 2 activities. Discuss what you learned with someone else.</td>
</tr>
<tr>
<td>☐ Catch the Dragon’s Tail</td>
<td>☐ One Potato, Two Potato</td>
<td>☐ Map the Markets</td>
</tr>
<tr>
<td>☐ Potato Relay</td>
<td>☐ No More Tears</td>
<td>☐ Read the Ads</td>
</tr>
<tr>
<td>☐ Lemonade</td>
<td>☐ A Juicy Squeeze</td>
<td>☐ Collect Coupons</td>
</tr>
<tr>
<td>☐ Pass the Milk!</td>
<td>☐ Brown Apple or Not</td>
<td>☐ Tune in to Commercials</td>
</tr>
<tr>
<td>☐ Bone</td>
<td>☐ Celery Crunch</td>
<td>☐ Use Unit Pricing</td>
</tr>
<tr>
<td>☐ Don’t Spill the Beans</td>
<td>☐ Forceful Beans</td>
<td>☐ Read Labels to Compare Beverages</td>
</tr>
<tr>
<td>☐ Name 3!</td>
<td>☐ Moving In and Out</td>
<td>☐ Read Labels to Find Lower-Fat Choices</td>
</tr>
<tr>
<td>☐ Fruit and Veggie Pyramid Builder</td>
<td>☐ Calcium-Coated Egg</td>
<td>☐ Make a Label Pyramid</td>
</tr>
<tr>
<td>☐ What’s for Snack?</td>
<td>☐ Attracting Iron</td>
<td>☐ Taste Test to Compare Brands</td>
</tr>
<tr>
<td>☐ Roll a Snack</td>
<td>☐ A Starchy Search</td>
<td>☐ Read to Younger Children</td>
</tr>
<tr>
<td>☐ Snacking Gossip</td>
<td>☐ A Raisin Dance</td>
<td>☐ Investigate Careers</td>
</tr>
<tr>
<td>☐ Hunt the Peanut</td>
<td>☐ An Inflating Reaction</td>
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</tbody>
</table>
### Cooking Skills
Practice and improve at least 5 skills. (check all that apply)

<table>
<thead>
<tr>
<th>Skill</th>
<th>I tried for the first time</th>
<th>I improved</th>
<th>I practiced at home</th>
<th>I want to practice more</th>
<th>I can do this well</th>
<th>I taught someone else</th>
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</thead>
<tbody>
<tr>
<td>washing hands</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>keeping work area clean</td>
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<tr>
<td>using sharp knives safely</td>
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<tr>
<td>using a peeler</td>
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<tr>
<td>using a grater</td>
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<td></td>
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<tr>
<td>using a melon baller</td>
<td></td>
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<tr>
<td>using a hand juicer</td>
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<tr>
<td>using a can opener</td>
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<td>using measuring cups, spoons</td>
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<td>using an oven</td>
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<td>using a stovetop burner</td>
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<td>using a microwave oven</td>
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<tr>
<td>using a blender</td>
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<td>draining liquids</td>
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</table>

### Food and Nutrition Skills
Learn more about at least 3 topics. (check all that apply)

<table>
<thead>
<tr>
<th>Skill</th>
<th>I heard about for the first time</th>
<th>I learned</th>
<th>I want to know more</th>
<th>I know this well</th>
<th>I taught someone else</th>
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<tbody>
<tr>
<td>choosing a variety of foods</td>
<td></td>
<td></td>
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<tr>
<td>limiting fat</td>
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<tr>
<td>limiting sugar</td>
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</tr>
<tr>
<td>adding fiber</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>trying different products</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>reading labels</td>
<td></td>
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<tr>
<td>choosing locally grown foods</td>
<td></td>
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</tr>
</tbody>
</table>

### My thoughts:

**What I enjoy most about cooking is**

**What I find frustrating about cooking is**

**Other foods I'd like to learn to prepare are**

Name: ___________________________  Date: ___________________________
Participation and Comments

Name: ___________________________________________ Date: ______________________

Phone, e-mail, address (optional): _____________________________________________

Please take a few minutes to tell us how well A Pyramid of Snacks met your needs and how it could be improved for working with children ages 9 to 12.

About Yourself:

☐ 4-H leader ☐ School-age child care provider ☐ Parent/guardian
☐ Scout or other youth leader ☐ Classroom teacher ☐ Other
☐ EFNEP educator ☐ Home schooling parent

Youth Participation: Briefly describe the program(s) in which you used this resource.

<table>
<thead>
<tr>
<th>Description of setting</th>
<th>Description of children</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ School-age child care</td>
<td>☐ Male</td>
<td>9-year-olds</td>
</tr>
<tr>
<td>☐ 4-H club</td>
<td>☐ Female</td>
<td>10-year-olds</td>
</tr>
<tr>
<td>☐ EFNEP</td>
<td>☐ African American</td>
<td>11-year-olds</td>
</tr>
<tr>
<td>☐ Community youth program</td>
<td>☐ Caucasian</td>
<td>12-year-olds</td>
</tr>
<tr>
<td>☐ Parenting program</td>
<td>☐ Hispanic</td>
<td>Other</td>
</tr>
<tr>
<td>☐ Classroom</td>
<td>☐ Native American</td>
<td></td>
</tr>
<tr>
<td>☐ Other</td>
<td>☐ Other</td>
<td></td>
</tr>
</tbody>
</table>

Your Use of A Pyramid of Snacks: Check all that apply.

☐ I helped the children to create a cooking series.
☐ I planned a cooking series for the children.
☐ I combined parts of A Pyramid of Snacks into existing educational programs.
☐ I created a new program opportunity for children using A Pyramid of Snacks.
☐ I reached new groups of children as a result of using A Pyramid of Snacks.

☐ We did less than five cooking sessions together.
☐ We did five or more cooking sessions together.
☐ We spent most of the time cooking together.
☐ We spent as much time on other food activities as on cooking.
☐ I would use this resource again.
☐ I shared this resource with another youth educator.

What is your overall evaluation of A Pyramid of Snacks? EXCELLENT GOOD FAIR POOR

Did you receive any training for using A Pyramid of Snacks? NO YES—where?

What did you especially like about A Pyramid of Snacks?

How could we improve A Pyramid of Snacks?
Apple Cinnamon Toast
*Makes 4 slices*

**Ingredients**
- sugar: 2 tablespoons
- cinnamon: 1 teaspoon
- apple: 1
- margarine: 2 teaspoons
- bread: 4 slices

**To Prepare**
1. Preheat oven to 375 degrees.
2. Measure sugar and cinnamon in a small bowl; stir to combine ingredients.
3. Wash and core apple. Cut apple into thin slices.
4. Place bread on baking sheet.
5. Spread margarine on the top side of each slice of bread.
6. Arrange apple slices on bread.
7. Sprinkle apples with cinnamon-sugar mixture.
8. Bake at 375 degrees until bread is toasted, about 10 to 15 minutes.

**Create-a-Flavor Changes**
*Add your own ideas, too!*

- Use pears or peaches instead of apples or combine two fruits.
- Mix 1/4 teaspoon nutmeg with the cinnamon.
- Add a few raisins.
- Use whole wheat, raisin, or other breads.

**Equipment**
- oven, measuring spoons, small bowl and spoon, cutting board, sharp knife, table knife, baking sheet
Cheese Quesadilla
Makes 1 quesadilla

<table>
<thead>
<tr>
<th>Ingredients</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>cheddar cheese</td>
<td>1 ounce</td>
</tr>
<tr>
<td>flour tortillas</td>
<td>2</td>
</tr>
</tbody>
</table>

Create-a-Flavor Changes
Add your own ideas, too!
- Use corn tortilla.
- Try different kinds of cheeses.
- Spread 2 tablespoons refried beans on tortilla before placing in skillet.
- Add a tablespoon of fresh chopped tomatoes, green peppers, or onions with grated cheese

To Prepare
1. Grate cheese.
2. Heat the skillet on medium-high on the stovetop.
3. Place one tortilla on the hot skillet. Sprinkle tortilla with grated cheese. Top with the second tortilla. Cook about 30 seconds, then flip.
4. Cook about 30 seconds on the second side. The quesadilla is done when both sides are golden brown and cheese is melted.

To Prepare in Microwave Oven
1. Grate cheese.
2. Place one tortilla on a microwave-safe plate. Sprinkle tortilla with grated cheese. Top with second tortilla.
3. Cover with damp paper towel.
4. Microwave on high (100% power) about 1 minute. The quesadilla is done when cheese is melted.

Equipment
grater, skillet or griddle, stovetop, microwave-safe plate, spatula
Confetti Slaw
Makes 4 cups

Ingredients
- green cabbage 1/4 small head
- carrots 2
- raisins 1/4 cup
- peanuts 1/4 cup
- vanilla yogurt 1/2 cup
- orange juice 1 tablespoon

To Prepare
1. Slice and cut cabbage into thin strips. Place pieces in large mixing bowl.
2. Peel and grate carrots. Add to mixing bowl.
3. Measure raisins and peanuts. Add to mixing bowl.
4. Mix all ingredients together.
5. Combine yogurt and orange juice in small bowl.
6. Add yogurt mixture to cabbage mixture, stirring to combine ingredients thoroughly.

Create-a-Flavor Changes
Add your own ideas, too!
- Combine 1/8 head each red and green cabbage.
- Add 2 tablespoons mini-marshmallows.
- Try a different flavor yogurt and juice.

Equipment
- cutting board, sharp knife, large mixing bowl, wooden spoon, vegetable peeler, grater, measuring cups, measuring spoons, small bowl
Fruit Yogurt Pops

Makes 6 pops

Ingredients
orange juice 2 cups
vanilla yogurt, low-fat 1/2 cup

Create-a-Flavor Changes
*Add your own ideas, too!
  * Try another juice or combinations of juices.
  * Try other flavors of yogurt.
  * Use 1 cup of juice and 1 cup of blueberries, strawberries, or raspberries.

To Prepare
1. Pour orange juice into the blender.
2. Measure yogurt and add to orange juice.
3. Blend at high speed for about 1 minute.
4. Pour the mixture into 6 small paper cups. Put a plastic spoon or a popsicle stick into each cup.
5. Freeze at least 4 hours.
6. Remove from freezer and peel off the paper cup to eat.

Equipment
measuring cup, blender, 6 small paper cups, 6 plastic spoons or popsicle sticks
Gardener's Salad
Makes 2 cups

Ingredients
- green beans, fresh 1 cup
- tomato, fresh 1
- cucumber 1/2
- vinegar 1 tablespoon
- vegetable oil 1 tablespoon
- sugar 1/2 teaspoon
- salt dash
- pepper dash

Create-a-Flavor Changes
Add your own ideas, too!
- Use 1 cup broccoli pieces instead of beans; steam 3 or 4 minutes longer.
- Steam 1/2 cup each beans and sliced carrots.
- To the dressing, add 1/2 teaspoon chopped fresh herbs: basil, dill, chives, oregano, tarragon, or thyme. Or add 1/4 teaspoon of a dried herb.

To Prepare
1. Snap ends off beans and break into 1- to 2-inch pieces.
2. Place beans in colander. Place colander under cold running water. Rinse beans, draining well.
3. Place about 1/2 inch water in a saucepan. Place steamer rack in pan and heat water to boiling.
4. Place beans in pan and cover with a tight-fitting lid.
5. Steam beans for about 5 minutes.
6. Drain beans; place in serving bowl.
7. Wash tomato. Place tomato on cutting board. With sharp knife, cut tomato in half crosswise. Place flat side of each half on cutting board and cut into wedges. Add tomato wedges to beans.
8. Peel cucumber. Place cucumber on cutting board. With sharp knife, cut into slices. Add cucumber slices to beans.
9. Measure vinegar, oil, sugar, salt, and pepper into a small jar. Tighten the lid and shake to mix ingredients.
10. Pour dressing over vegetables. With a spoon, gently toss to combine all ingredients.

Equipment
- colander, saucepan with steamer rack, stovetop, serving bowl, cutting board, sharp knife, jar with lid

A Pyramid of Snacks, Cornell Cooperative Extension, Division of Nutritional Sciences, Cornell University, 1998
Hot Chocolate

Makes 2 1/4 cups dried mix or about 7 cups hot chocolate

Ingredients
- instant nonfat dry milk powder: 1 3/4 cups
- unsweetened cocoa powder: 1/4 cup
- sugar: 1/4 cup

Create-a-Flavor Changes

Add your own ideas, too!

After the hot chocolate is heated,
- add 1/2 teaspoon vanilla.
- add 1/8 teaspoon mint or peppermint extract.
  stir with a cinnamon or peppermint stick.

To Prepare Mix

1. Measure nonfat dry milk powder into mixing bowl. Measure and add cocoa and sugar. Stir to combine ingredients.

2. Store prepared mix in a covered container or in a reclosable plastic bag.

To Prepare Mix

1. Heat water in a kettle or pan on the stove.

2. Pour hot water in a mug, three-quarters full.

3. Measure 1/3 cup hot chocolate mix and stir into hot water.
  or
  Fill a microwave-safe mug three-quarters full of cold water. Microwave on high (100% power) for 2 minutes. Measure 1/3 cup hot chocolate mix and stir into hot water.

Equipment

mixing bowl, mixing spoon, measuring cups, container for storing prepared mix, stovetop or microwave oven, mug
Lemonade
Makes 1 glass lemonade

Ingredients
lemon  1
water  3/4 cup
sugar  1 or 2 tablespoons

To Prepare
1. Cut lemon in half crosswise.
2. Place lemon half on juicer. Push and twist to squeeze out the juice.
3. Pour juice into glass. Add about 3/4 cup water.
4. Add sugar, stirring to mix ingredients.

Equipment
cutting board, sharp knife, hand-held juicer, liquid measuring cup, measuring spoon, glass for serving

Create-a-Flavor Changes
Add your own ideas, too!
- Squeeze one-half each lemon and lime.
- Squeeze one-half each lemon and orange.
- Add 1/4 cup apple juice concentrate and leave out the sugar.
- Use 1/4 cup seltzer water and 1/2 cup water.
Oatmeal Raisin Cookies
Makes 2 1/2 dozen cookies

Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>sugar</td>
<td>3/4 cup</td>
</tr>
<tr>
<td>margarine</td>
<td>2 tablespoons</td>
</tr>
<tr>
<td>egg</td>
<td>1</td>
</tr>
<tr>
<td>milk</td>
<td>2 tablespoons</td>
</tr>
<tr>
<td>applesauce</td>
<td>1/4 cup</td>
</tr>
<tr>
<td>flour</td>
<td>3/4 cup, all-purpose</td>
</tr>
<tr>
<td>baking soda</td>
<td>1/4 teaspoon</td>
</tr>
<tr>
<td>cinnamon</td>
<td>1/2 teaspoon</td>
</tr>
<tr>
<td>nutmeg</td>
<td>1/8 teaspoon</td>
</tr>
<tr>
<td>salt</td>
<td>1/4 teaspoon</td>
</tr>
<tr>
<td>rolled oats</td>
<td>1 1/4 cup, quick-cooking</td>
</tr>
<tr>
<td>raisins</td>
<td>1/2 cup</td>
</tr>
</tbody>
</table>

Create-a-Flavor Changes
Add your own ideas, too!

- Use chopped figs, apricots, or other dried fruit instead of raisins.
- Omit the raisins and use 3/4 cup rolled oats and 3/4 cup raisin bran cereal.
- Use 1/2 cup whole wheat flour and 1/4 cup all-purpose flour.
- Use 2 tablespoons orange juice instead of milk.
- Add nuts, coconut, or chocolate chips.

To Prepare

1. Preheat oven to 350 degrees. Lightly grease baking sheet.
2. Measure sugar and margarine into large mixing bowl. Beat until well blended.
3. Crack egg into small bowl. Add to sugar mixture; stir until well blended.
4. Measure milk and applesauce into sugar mixture; stir until well blended.
5. In a second mixing bowl, combine flour, baking soda, cinnamon, nutmeg, and salt.
6. Add flour mixture to sugar mixture; stir until well blended.
7. Measure rolled oats and raisins into batter; stir until well blended.
8. Drop dough by rounded teaspoons onto baking sheet.
9. Bake 10 to 13 minutes, until lightly browned.

Equipment
oven, baking sheet, measuring spoons, measuring cups, liquid measuring cup, mixing bowls (medium and large), wooden spoon, small bowl to crack egg into, rubber spatula, spoon
Oven Fries
Makes 48 fries

Ingredients

potatoes 3
vegetable oil 2 teaspoons

Create-a-Flavor Changes
Add your own ideas, too!

- Try different kinds of potatoes.
- Add 1 teaspoon chili powder to the oil.
- Add 1 teaspoon garlic powder to the oil.
- Sprinkle potatoes with grated parmesan cheese before baking.
- Use sweet potatoes and sprinkle with cinnamon.

To Prepare

1. Preheat oven to 425 degrees.
2. Wash and peel potatoes.
3. Put potatoes on cutting board. With a sharp knife, cut potatoes in half lengthwise. Place the potato halves flat side down, and cut each into 4 slices; cut again to make thinner strips.
4. Place potatoes on a baking sheet.
5. Measure oil into a small bowl.
6. With pastry brush, lightly coat potatoes with oil.
7. Place baking sheet in preheated oven. Bake potatoes 20 minutes, or until browned.

Equipment

oven, vegetable peeler, cutting board, sharp knife, baking sheet, measuring spoon, pastry brush, small bowl
Pyramid Kabobs
Makes 4 kabobs

Ingredients
French bread 1/4 loaf
Swiss cheese 1/4 pound
lean cooked ham 1/4 pound
green pepper 1
cantaloupe 1/2 of whole

To Prepare
1. Cut bread into chunks.
2. Cut cheese into cubes.
3. Cut ham into cubes.
4. Wash green pepper, remove seeds; cut into short strips.
5. Scoop balls of cantaloupe (or remove from rind and cut into cubes).
6. Assemble the foods on the wooden skewers.

Create-a-Flavor Changes
Add your own ideas, too!

Choose other ingredients from each part of the Food Guide Pyramid:
- Meat: cooked chicken, lean roast beef, or turkey
- Milk: try different cheeses
- Vegetables: tomato wedges or cherry tomatoes, broccoli or cauliflower pieces, cucumber
- Fruit: strawberries, orange sections, banana chunks, pineapple chunks, grapes
- Bread: bagel, pita, whole wheat bread, cut into pieces

Equipment
cutting board, sharp knife, melon baller, wooden skewers

A Pyramid of Snacks, Cornell Cooperative Extension, Division of Nutritional Sciences, Cornell University, 1998
### Pyramid Pockets
*Makes 2 sandwiches*

<table>
<thead>
<tr>
<th>Ingredients</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>egg</td>
<td>1</td>
</tr>
<tr>
<td>pita bread</td>
<td>1</td>
</tr>
<tr>
<td>seedless grapes</td>
<td>a handful</td>
</tr>
<tr>
<td>Swiss cheese</td>
<td>2 ounces</td>
</tr>
<tr>
<td>alfalfa sprouts</td>
<td>a handful</td>
</tr>
</tbody>
</table>

#### To Prepare
1. **To hard-cook egg:** Place egg in saucepan with tight-fitting lid and cover with cold water. Set pan on burner; cook on high until water begins to boil. Turn off burner. Remove pan from stove; let sit 10 minutes. Place egg in cold water.
2. While egg is cooking, prepare other ingredients.
3. Cut pita bread in half.
4. Cut grapes in half.
5. Grate cheese.
6. Peel and discard eggshell; chop egg.
7. **Assemble sandwich** by layering chopped egg, cheese, grapes, and alfalfa sprouts in each pita half.

#### Create-a-Flavor Changes
*Add your own ideas, too!*

Choose other ingredients from each part of the Food Guide Pyramid:

- **Meat:** lean ham, cooked chicken, canned tuna, garbanzo beans
- **Milk:** try different types of grated cheese or cottage cheese or yogurt
- **Vegetables:** lettuce, tomatoes, cucumbers, mushrooms, green pepper, shredded carrot, chopped celery
- **Fruit:** crushed pineapple, chopped apple, raisins

---

**Equipment**

saucepan with tight-fitting lid, cutting board, sharp knife, grater
Rainbow Fruit Salad  
*Makes 4 cups*

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>oranges</td>
<td>2</td>
</tr>
<tr>
<td>kiwi</td>
<td>1</td>
</tr>
<tr>
<td>pineapple chunks</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>blueberries</td>
<td>1/2 cup</td>
</tr>
</tbody>
</table>

**To Prepare**

1. To peel oranges: With small, sharp knife, cut a small circle from top of orange, leaving one edge attached. With a sawing motion, cut around orange, forming a spiral of peel. Turn the orange in your hand as you cut. Cut off any remaining spots of white pith left on the orange.

2. To slice oranges: With serrated knife, cut orange in half from top to bottom. Place flat side on cutting board and slice orange in the middle of each section. Place orange slices in serving bowl.

3. Peel kiwi using the same motion as peeling an orange. Cut peeled kiwi in half lengthwise. Place flat side on cutting board and cut several crosswise slices. Place pieces in serving bowl.

4. Open can of pineapple. Pour pineapple into a colander and drain; save pineapple juice for another use. Measure pineapple and place in serving bowl.

5. Measure blueberries. Add to serving bowl.

6. Gently mix all fruits.

**Equipment**

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>sharp knife, serrated knife, cutting board, serving bowl, can opener, colander, spoon</td>
</tr>
</tbody>
</table>
# Rice-Crusted Pizza

*Makes 12 slices*

## Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>rice</td>
<td>to make 2 cups cooked</td>
</tr>
<tr>
<td>mozzarella cheese</td>
<td>16-ounces part-skim</td>
</tr>
<tr>
<td>egg</td>
<td>1</td>
</tr>
<tr>
<td>salt</td>
<td>1/4 teaspoon</td>
</tr>
<tr>
<td>tomato puree</td>
<td>2 cups</td>
</tr>
</tbody>
</table>

## Create-a-Flavor Changes

*Add your own ideas, too!*

- Try different kinds of rice.
- Try different kinds of cheese.
- Use sliced or chopped green peppers, onions, mushrooms, or other vegetables as toppings.

## To Prepare

1. **Heat oven** to 350 degrees. Grease a 12-inch pizza pan or baking sheet.
2. Cook rice following directions on the package; set aside.
3. Grate cheese; set aside.
4. Crack egg and place in mixing bowl, stirring to blend. Measure and add 2 cups cooked rice, 1 cup grated cheese, and salt. Mix well to combine ingredients.
5. Spread rice mixture in prepared pan, pressing firmly and making outer edge slightly raised.
6. Spread tomato puree evenly over rice mixture.
7. Place pan in oven. Bake for 25 minutes.
8. Remove pan from oven and sprinkle pizza with remaining cheese. Bake 5 minutes longer or until cheese melts.

## Equipment

oven, 12-inch pizza pan or baking sheet, saucepan with tight-fitting lid, grater, mixing bowl and spoon, measuring spoons and cups, can opener, pizza cutter or knife
# Tortilla Chips and Bean Dip

*Makes 2 cups dip, 3 dozen dippers*

## Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>corn tortillas</td>
<td>4</td>
</tr>
<tr>
<td>kidney beans</td>
<td>1 16-ounce can</td>
</tr>
<tr>
<td>salsa</td>
<td>1/4 cup</td>
</tr>
<tr>
<td>sour cream, nonfat</td>
<td>1/4 cup</td>
</tr>
<tr>
<td>cheddar cheese</td>
<td>1/2 cup shredded</td>
</tr>
<tr>
<td>lettuce</td>
<td>1 cup shredded</td>
</tr>
</tbody>
</table>

## To Prepare

1. Preheat oven to 400 degrees.

2. **Place tortillas in a stack on** cutting board. With a sharp knife, cut stack into eight pieces, forming triangles or wedges.

3. Lay tortilla pieces out in single layer on baking sheet. Set aside while making dip.

4. Open can of beans. Pour beans in colander; rinse and drain. Place beans in a small mixing bowl and mash with a potato masher. Spread beans over bottom of baking dish.

5. Measure salsa and spread over beans.

6. Measure sour cream and spread over beans.

7. Grate and measure cheese; sprinkle over bean mixture.

8. Place lettuce wedge on cutting board. Slice into thin strips; set aside.

9. Place both the baking sheet with tortilla pieces and the dip in preheated oven. Bake about 8 minutes or until tortilla pieces are crisp and dip is bubbly. Sprinkle lettuce over dip and serve with tortilla chips.

## Create-a-Flavor Changes

*Add your own ideas, too!*

- Use monterey jack or another cheese.
- Substitute black beans for kidney beans.
- Substitute 1/4 cup chopped fresh tomatoes for taco sauce.
- Spread one small can chopped green chilis over beans.

## Equipment

- oven, cutting board, sharp knife, baking sheet, can opener, colander, fork or potato masher, mixing bowl, 2-cup oven-safe baking dish, measuring cups, wooden spoon
Tuna Pick Pockets
Makes 2 pocket sandwiches

Ingredients
- tuna, water-packed: 1 can (6 1/8 ounce)
- celery: 1 stalk
- light mayonnaise: 1 tablespoon
- pita pocket bread: 2
- alfalfa sprouts: 1 cup

To Prepare
1. Open can of tuna. Dump tuna into colander to drain liquid. Place drained tuna in mixing bowl.
2. Wash celery. Place celery on cutting board. With sharp knife, slice and chop celery. Add celery to tuna.
3. Add mayonnaise to tuna. Stir to mix all ingredients.
4. Break pita bread in half. Fill each half with tuna mixture. Top with alfalfa sprouts.

Create-a-Flavor Changes
Add your own ideas, too!
- Wash and grate 1/2 carrot; add with the celery.
- Use shredded lettuce instead of alfalfa sprouts.
- Use plain nonfat yogurt instead of mayonnaise.
- Season tuna mixture with 1/4 teaspoon garlic powder or onion powder.
- Add 1 tablespoon chopped pickles or relish to the tuna mixture.
- Add 1 tablespoon chopped green pepper or carrots to the tuna mixture.

Equipment
- can opener, colander, mixing bowl, cutting board, sharp knife, measuring cup, measuring spoon, mixing spoon
Veggies and Dip to Go
Makes two veggie “bowls”

Ingredients
- green pepper 1
- celery 1 stalk
- carrot 1
- broccoli small section of head
- cauliflower small section of head
- yogurt, low-fat 1/4 cup

To Prepare
1. Wash and drain all fresh vegetables.
2. Cut the pepper in half (from side to side). Clean out the seeds. Set the pepper “bowls” aside.
3. Cut the celery and carrot into sticks.
4. Cut the broccoli and cauliflower into small pieces.
5. Spoon a layer of yogurt into each pepper bowl.
6. Place half of the celery sticks, carrot sticks, broccoli, and cauliflower in each pepper bowl.
7. Enjoy the portable dip and dippers!

Create-a-Flavor Changes
Add your own ideas, too!
- Choose other fresh vegetables.
- Try apple, pear, or banana slices for dippers.
- Add a little orange juice to plain yogurt.
- Choose different flavored yogurts.
- Blend cottage cheese with a dash of lemon juice, dill seed, and minced dried onion instead of yogurt.

Equipment
- cutting board, sharp knife, spoon
Food Activities
Games through the Pyramid

Here’s a way to have fun and learn something about food, too! Most of these games were adapted from popular group games to include a food message. Think about a favorite game you like to play. How might you add a food message to it? What new games could you create?

Catch the Dragon’s Tail

Food message
Grain foods provide complex carbohydrate (starch) that provides energy. And it takes lots of energy to catch a dragon’s tail!

Supplies
a handkerchief

Directions
1. Children line up behind each other, putting arms around the waist of the person ahead. This forms the dragon. The first person in line is the dragon’s head; the last person in line tucks a handkerchief in a pocket or waistband to make the dragon’s tail.
2. At a signal, the dragon begins chasing its tail. Encourage all parts of the dragon to roar whenever the dragon urge hits.
3. When the head finally captures the tail, that player takes the handkerchief and becomes the new tail. The player who was second in line then becomes the dragon’s head. Continue playing until everyone has had a chance to be the head or until the dragon runs out of energy!

Potato Relay

Food message
Potatoes are a good source of many nutrients—carbohydrate, protein, vitamins, and minerals. It takes many nutrients to make all of the systems in your body work together. And that’s what it takes to finish this relay!

Supplies
four potatoes; four serving-size spoons

Directions
1. Players form two lines for a relay. Pace off a relay distance for each line of at least five yards, marking it with a potato placed on the ground.
2. Give a potato on a spoon to the first player in each line. At a signal to start, the player carries the potato on the spoon, walks around the potato on the ground, and returns to the starting point, handing the spoon to the next person in line, who continues the relay. Any player who drops the potato stops and puts it back on the spoon before continuing.
3. When everyone has finished, the leader directs the players to jump up and down while counting to 25. At “25” the leader says “Mashed potatoes—You’re all winners.”
Lemonade

Food message
You can learn to make many snacks instead of buying snack foods.

Supplies
none

Directions
1. Players divide into two teams with a clearly defined playing area. The team selected to go first secretly chooses two things: a place to be from (city, state, or country) and a snack to prepare using actions like charades.

2. The “acting” team moves to the center of the playing area, saying, “Here we come.” The other team asks, “Where from?” The first team replies with the chosen place. The second team then asks, “What’s your snack?” the first team replies, “Lemonade!” and begins preparing the selected snack with hand motions.

3. The other team tries to identify the snack, calling out guesses. When someone calls out a correct guess, a game of “tag” begins. The “acting” team turns and runs back to their starting line as the other team tries to tag them.

The teams switch roles and the game continues.

Pass the Milk!

Food message
Milk is an excellent source of calcium. It takes lots of calcium to have strong bones. Exercise also helps build strong bones.

Supplies
one or two empty milk cartons or jugs

Directions
1. Players form a line with about two feet between each person or divide the group into two teams, creating two lines.

2. The person at the head of the line holds a milk carton. At a signal to start, he passes the carton over his head, stretching back (but not falling over!) to reach the player behind. That player takes the carton and passes it back between his legs. The passing continues “over” and “under” until the carton reaches the last person in line.

3. The last person in line runs (or skips or hops) to the front of the line, and the passing continues until all players are back to their original positions.
Food

Food message
Many foods contain calcium, which is needed to make strong bones.

Supplies
a large rubber ball (not a hard ball); a list of calcium-rich foods; slips of paper with the same food names.

Directions
1. Each player draws a slip of paper with the name of a calcium-rich food written on it. This is the player's secret food name for playing the game.
   The player with the ball secretly chooses a name from the calcium-rich food list.
2. The game is played like Spud. One player throws the ball straight up as high as possible and calls a food name from the list on the chart. The player whose food name is called tries to catch the ball, and the others run away as quickly as possible. When the catcher has the ball, he or she yells “Freeze!” and all the runners must stop.
3. The player with the ball aims at a “frozen” player, throwing below the waist. A player who is “hit” is given a letter, first B, then Q, N, and E. If the thrower fails to make a hit, he or she is assigned a letter. The targeted player begins the game again, calling another food name.

Don't Spill the Beans

Food message
Dried beans, peas, and lentils (legumes) are grouped with meats in the Food Guide Pyramid. That's because they contain many of the same nutrients: protein, iron, and B vitamins. There are many different kinds and varieties of legumes.

Supplies
two tablespoons; six paper cups; two containers of “bean mix.” Choose three different kinds of legumes for the mix, for example, kidney beans, split peas, and lentils or pinto beans. black beans, and navy beans.

Directions
1. Divide the players into two groups. Each group forms a line and is given a container of bean mix. Mark a starting and ending point for each line, at least five yards apart. Place three paper cups at each ending point.
2. The first player in each line takes a tablespoon of the bean mix. At a signal to start, the player carries the tablespoon of beans to the ending point where she sorts the beans into the three cups, then runs to give the next player in line the empty spoon. Continue the relay until all players have sorted their beans.
3. Have the players come together to talk about the different kinds of legumes. Which ones are familiar? How are they used? Which are favorites?
Fruit and Veggie Pyramid Builder

Food message
Raw fruits and vegetables make great snacks. They provide many vitamins and minerals and very little fat.

Supplies
pencil and paper or chalk and chalkboard

Directions
1. This game is like Hangman only the object is to build a Food Pyramid instead of a victim on the gallows. One player is the pyramid builder and selects the name of a fruit or vegetable and then marks a series of dashes on a chalkboard or paper to represent each letter of the word. If the word is “apple,” the hangman will draw five dashes: __ __ __ __ __.

2. The first player tries to guess a letter that might be in the word. If the guess is correct, for example a “P,” the hangman fills in the corresponding blanks: __ P __ __.

3. If the guess is incorrect, the pyramid builder begins drawing the Food Guide Pyramid, in this order: the base, first side, second side, line separating grains, line between fruits and vegetables, line separating fruits and vegetables from the next level, line separating milk and meat, line creating the tip.

4. Any player who guesses the word before the pyramid is finished beats the builder. Combinations of words as well as single words can be used to increase difficulty.

Name 3!

Food message
A wide variety of foods make up the Food Guide Pyramid.

Supplies
an apple (or other object to pass)

Directions
1. Players sit in a circle except one who is the leader and is in the center of the circle.

2. The leader counts aloud to 10 while the other players begin passing the apple as quickly as possible. At the count of 10, the passing stops.

3. The leader then says, “Name 3 __.” Examples are 3 vegetables, 3 meats, 3 flavors of ice cream, 3 kinds of nuts, 3 things made from milk, 3 kinds of bread, 3 kinds of cereal, 3 red fruits, 3 yellow vegetables, 3 foods that start with the letter “A.” Encourage players to make up their own categories.

4. The person holding the apple on the count of “10” tries to name three of whatever food the leader calls out.

5. The player holding the apples becomes the new leader and play continues.
What's for Snack?

Food message
A wide variety of foods make healthy snack choices.

Supplies
a large picture of the Food Guide Pyramid taped to the floor; a marker or several small stickers

Directions
1. Players sit in a circle around the Food Guide Pyramid. One player starts the game by turning to a neighbor and asking: “What’s for snack?” The player responds by naming a food and placing a mark or sticker on the group(s) it belongs to in the pyramid. The play continues around the circle until everyone has a turn asking, “What’s for snack?” and naming a food.

2. To add another level of difficulty, have each player repeat the previous response(s) before naming a new food. For example, the fourth player would answer the question, “What’s for snack?” by first naming the three foods already mentioned (such as a bagel, peanut butter, milk) and then naming his or her own choice (such as an apple).

Roll a Snack

Food message
A wide variety of foods make healthy snack choices. Snacks can be single foods such as carrot sticks or an apple or combination foods like a peanut butter sandwich or a slice of pizza.

Supplies
two 8-ounce milk cartons, colored paper, glue, scissors

Directions
1. To make the Food Pyramid die: Cut the tops off the milk cartons; fit one carton inside the other to make a cube. On each side of the cube glue a different color and write the food group name. For example, Grain (brown); Vegetable (green); Fruit (yellow); Milk (white); Meat (red); Combination (purple).

2. Players sit in a circle. At a signal from the leader, the players begin passing the die around the circle in one direction. When the leader calls, “Change!” the die should be moved in the other direction. When the leader calls, “Roll!” the player holding the die rolls it and names a snack for the food group shown on the die. That player becomes the leader and begins the game again.

3. To increase the challenge, write names of snacks down as they are called and give points for each new snack.
Hunt the Peanut

Food message
It’s fun to make your own snacks.

Supplies
a peanut

Directions
1. Players sit close together in a circle, except for one who is the “hunter” and sits in the center of the circle.

2. While the hunter’s eyes are closed, a peanut is given to one of the players. The players begin passing the peanut around the circle without letting it show; those players without the peanut pretend they are passing it to try to fool the hunter. As soon as passing begins, the players say, “Hunt that peanut,” and the hunter opens his or her eyes.

3. When the hunter suspects someone of having the peanut, he or she calls the name of that player. The passing stops, and the called player must reveal whether he or she has the peanut. If the guess is correct, the player says, “Peanut, Peanut Butter, I like to make______” (naming a snack such as fruit salad) and becomes the hunter. If the hunter guessed incorrectly, the passing continues.

Snacking Gossip

Food message
Snacks are eaten in many situations, such as at home, at school, at parties, at ball games, or at the mall. Players think up snacking situations for this game.

Supplies
none

Directions
1. Players sit in a circle with one player chosen to start a “rumor” about snacking. This first player very quickly whispers a statement about snacking into the ear of the next player. The statement is rapidly passed around the circle from ear to ear.

2. The last player to receive the message must recite exactly what he or she has heard (it will probably have little to do with the original message). Then this new message is compared to the original version. The next player starts a “rumor” and the game continues.

Games are adapted from materials developed by Cornell Cooperative Extension of Tompkins County and Cornell Cooperative Extension of Nassau County; The Youth Curriculum Sourcebook (Madison: University of Wisconsin Cooperative Extension, 1994); and Hopscotch, Hangman, Hot Potato, and Ho Ho Ho (New York: Simon & Schuster, 1990).
One Potato, Two Potato

Supplies
1 small baking potato
1 red-skinned new potato
2 cups water
4 tablespoons salt
cutting board
knife
two liquid measuring cups

What to do
• Cut each potato in half.
• Pour 1 cup water into each measuring cup.
• Place 2 tablespoons salt in each cup of water.
• Put half the baking potato in one cup.
• Put half the new potato in the other cup.

What happens?

The Inside Story
The two potatoes behave differently in the salty water because one contains more starch and less water than the other. Potatoes are starchy food, but new potatoes have less starch and more water than baking potatoes. That means the new potato is less dense than the baking potato, which is why it floats on the salty water. What happens if you use plain, unsalted water? Or use more or less salt?

No More Tears

Supplies
2 onions
running water
knife
cutting board

What to do
• Peel both onions.
• Slice one under running water.
• Slice the other without water.

What happens?

The Inside Story
An onion is made up of many cells. When you cut it, you tear the cell walls, allowing a gas (propanethial-sulfur oxide) to escape. When the gas mixes with air it turns into sulfuric acid, and that’s what causes you to cry. The running water dilutes the gas before it can combine with the air. What happens if you chill an onion in the refrigerator before slicing it? How does that affect the gas?
A Juicy Squeeze

Supplies
2 lemons
knife
cutting board
2 liquid measuring cups

What to do
• Cut one lemon in half.
• Squeeze out as much juice as you can.
• Roll the second lemon on a hard surface.
• Cut and squeeze the second lemon.

What happens?

The Inside Story
Rolling the lemon breaks up the tissues of the fruit so the juice comes out more easily and you get more juice. What other fruits can you squeeze juice from? Would rolling make a difference?

Brown Apple or Not

Supplies
an apple
knife
cutting board
refrigerator
lemon juice

What to do
• Cut the apple into four pieces.
• Leave one piece on the kitchen counter.
• Set one piece in the refrigerator.
• Put lemon juice on the other two pieces.
• Leave one of these on the kitchen counter.
• Set the other one in the refrigerator.

What happens?

The Inside Story
An apple is made up of lots of cells. When you cut it, you tear the cell walls, releasing an enzyme called polyphenoloxidase. The enzyme interacts with compounds in the apple (phenols) and oxygen, making the fruit turn brown. The cold temperature of the refrigerator slows down the action of the enzyme. The acid in lemon juice stops the enzyme action. How do different varieties of apples compare? What happens if you use orange, pineapple, grape, or other juices instead of lemon?
**Celery Crunch**

**Supplies**
- knife
- 1 stalk celery (with leaves, if possible)
- cutting board
- water
- liquid measuring cup
- red food coloring

**What to do**
- Cut a slice off the bottom of the celery stalk.
- Pour 1/4 cup water in the measuring cup.
- Add 6 drops of red food coloring.
- Place the celery, cut side down, in the cup.

*What happens after 15, 30, and 45 minutes?*

*Pull the celery out and cut another slice across the bottom. What do you notice?*

**The Inside Story**
A celery stalk has tiny tubes (*xylem*) through which water and nutrients flow into the plant. When you pull the celery out of the colored water, the tubes are the colored part that you see. From the tubes, water enters all the cells in the plant. When the cells are full of water, the cell walls are firm and that's what helps keep the crunch in celery. What happens if you leave a piece of celery out of the refrigerator overnight? What happens if you then put it in a glass of water? What happens if the temperature of the water varies (hot, ice water, room temperature)?

**Forceful Beans**

**Supplies**
- dry beans
- plastic vial (snap-on lid)
- water

**What to do**
- Pack the vial full of beans.
- Pour in enough water to fill in all the spaces.
- Snap the lid on the vial.
- Set the vial in a bowl overnight.

*What happens? Take the beans out of the vial. How easy is it to fit them back in?*

**The Inside Story**
As the dry beans soak, the seed coat softens and the beans take in water. The expanding beans exert a strong force. It's enough either to pop off the cap or to crack the sides of the plastic bottle. What happens with lentils, macaroni, rice, raisins, or other dried foods?
Moving In and Out

Supplies
water
liquid measuring cup
two bowls
salt
tea spoon
potato
knife
cutting board

What to do
- Measure 1 cup water into each bowl.
- Add 3 teaspoons of salt to one bowl.
- Cut the potato into 1/4-inch slices.
- Put two slices in each bowl.
- Put two slices on the counter.
- Wait 15 minutes.
- Pick up each potato slice and try to bend it.

What happens?

The Inside Story
Potatoes contain quite a bit of water and a very small amount of salt. Water always moves across a membrane (a process called osmosis) toward the side containing the most dissolved material (in this experiment, the salt). So water moves out of the potatoes in the salty water, making the potatoes limp and easy to bend. Water moves into the potatoes in the plain water, making the slices stiff. What happens with other vegetables? With different amounts of salt? With water of different temperatures?

Calcium-Coated Egg

Supplies
egg
cup
white vinegar

What to do
- Place the whole raw egg in the cup.
- Cover the egg with vinegar.

What happens after 15 minutes, 30 minutes, 1 hour, several hours, overnight?

The Inside Story
Calcium is a mineral that your body needs to form strong bones and teeth. It also forms the shell on eggs. Eggshells are made of calcium carbonate. The chemical name for vinegar is acetic acid. When you put the egg in the vinegar, the chemicals react. You see a chemical reaction happening as bubbles form on the surface of the eggshell. Carbon dioxide is created, and the eggshell begins to soften, eventually dissolving totally. Try this experiment with a thin chicken bone. What happens?
Attracting Iron

**Supplies**
- oatmeal (a single packet)
- nonmetallic container (plastic cup or jar)
- magnet
- pencil
- tape
- plastic sandwich bag
- white paper

**What to do**
- Pour the packet of oatmeal in the container.
- Tape a magnet to one end of the pencil.
- Wrap the sandwich bag around the magnet.
- Stir the cereal for about a minute with the magnet, holding the bag against the pencil.
- Pull the bag-covered pencil out of the cereal.
- Hold it over the paper and remove the pencil.
- Shake the bag over the paper.
- Move the magnet back and forth under the paper.

**What happens?**

**The Inside Story**
Some cereals are fortified with food-grade iron filings, listed as *reduced iron* on the label. The magnet attracts tiny particles of iron separated from the cereal. If you can’t see any, stir the cereal again or repeat with a new packet of cereal. Iron is a mineral that your body needs to function properly. It’s used to make hemoglobin, which carries oxygen in the blood circulating throughout the body.

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A Starchy Search

**Supplies**
- foods to test
- knife
- cutting board
- newspaper
- paper plate
- iodine
- eyedropper

**What to do**
*Handle iodine carefully to avoid staining your clothes or work area and throw away all food samples. Iodine is poisonous.*
- Cut small samples of foods to test.
- Protect work surface with newspaper.
- Place a food sample on a paper plate.
- Put one or two drops of iodine on the food.
- Repeat for each sample.

**What happens?**

**The Inside Story**
Iodine reacts with starch to produce a dark blue-black color. Iodine is an *indicator* for starch because it creates a chemical reaction that is observed by the color change. If no starch is present, the color doesn’t change. Starch is a carbohydrate (a nutrient) found in many plant foods. All grain foods, many vegetables, and some fruits contain starch. How do the different parts (inside, outside, peel, seed) of a food such as a pea or apple compare? How do cooked and uncooked foods such as a carrot or dry bean compare?
A Raisin Dance

Supplies

- clear plastic cup
- vinegar
- teaspoon
- baking soda
- raisins

What to do

- Fill the cup two-thirds full of vinegar.
- Stir in 1 teaspoon of baking soda.
- Add a few raisins.

What happens?

The Inside Story

The vinegar and baking soda react to form carbon dioxide gas. The raisins sink to the bottom of the cup. Then bubbles of carbon dioxide collect on the raisins, making them rise to the surface. At the surface, the bubbles break and the raisins fall to the bottom of the cup again. As long as there are bubbles, the raisins keep dancing. What happens with other small foods such as grapes, peanuts, or macaroni? Which are the best dancers? Does size or weight of the food make a difference?

An Inflating Reaction

Supplies

- vinegar
- juice or soda bottle (small neck opening)
- balloon
- funnel
- baking soda
- teaspoon

What to do

- Pour some vinegar in the bottle.
- Stretch the balloon over the bottom of the funnel, or have two people stretch the neck of the balloon.
- Spoon 1 teaspoon baking soda into funnel.
- Baking soda should now be in the balloon.
- Stretch balloon over opening of bottle.
- Shake balloon so baking soda falls into bottle.

What happens?

The Inside Story

The reaction that causes the balloon to expand is the same one that causes muffins, pancakes, and other breads to rise. The acid in vinegar combines with the baking soda (a base) to create carbon dioxide gas. The carbon dioxide makes thousands of tiny bubbles, causing batter to expand and increase in volume during baking. What happens if you use baking powder? What happens with other acid ingredients such as lemon juice or buttermilk?
1. Map the Markets

Make a list of the places to buy food in your community. Where are they located? What are the choices (such as supermarkets, convenience stores, specialty stores, or farmers markets)? Visit at least two of these places and compare them.

2. Read the Ads

Collect the food advertisements from your newspaper for one or more weeks. What do the ads tell you? How many stores print weekly ads? Are the same foods featured in each store?

3. Collect Coupons

Collect as many food coupons as you can. Where do you find them? How many types of foods did you find coupons for? What types of foods were not featured in coupons? Why do you think some people choose to use coupons and others don’t?

4. Tune in to Commercials

Tell about a catchy commercial you’ve seen on TV. Why do you remember it? Many snack foods are heavily advertised. How many can you recall from hearing commercials? Use your imagination to make up your own commercial. Choose a snack food or invent your own to sell.

5. Use Unit Pricing

Take a trip to a supermarket to find out about unit pricing. How can it help you make choices? Choose at least five snack foods to study (such as granola bars, pretzels, yogurt, peanut butter, and raisins). Use the unit price stickers to compare prices of different brands and package sizes. What did you learn? Are the larger quantities always cheapest? Are the store brands always cheapest?

6. Read Labels to Compare Beverages

Choose a fruit juice. List five things you can learn about the product by reading the label. Now read the labels from at least five more beverages. Do they all have the same information? What can you say about these beverage choices?

7. Read Labels to Find Lower-Fat Choices

Choose at least three different products (such as graham crackers, cheddar cheese, and microwave popcorn). For each product find out how many choices there are, what difference there is in fat content among the choices, and where the product fits in the Food Guide Pyramid. Choose at least one product for a taste test.

8. Make a Label Pyramid

Create a wall mural-size Food Guide Pyramid using poster board, shelf paper, or newspaper. Then start collecting labels from any foods that might be eaten for snacks or used to prepare snacks. Try to find labels for foods in every part of the Food Guide Pyramid. For which parts of the pyramid do you find the most or the fewest labels? What do the labels tell you about the nutrient value of these foods? Do all foods in each part of the pyramid provide the same nutrients?

9. Taste Test to Compare Brands

Choose a food you might use for making a snack such as canned peaches, peanut butter, or yogurt. Buy both a store brand and a national brand and record the price of each. Prepare “secret” samples for at least three other people. You will need to keep track of which brand is which but don’t let the tasters know. Have them taste and compare the products. Does everyone prefer the same product? Do characteristics besides taste influence their choices? How do the prices compare?
10. Compare Convenience

Choose one food product such as blueberry muffins or chocolate pudding that can be prepared from scratch, purchased as a packaged mix, or purchased as a ready-to-eat product. Then compare convenience, taste, cost, and nutrient content. What are the advantages and disadvantages of each choice? Which would you choose?

11. Read to Younger Children

Volunteer to read to younger children in a child care program or at the library. Or maybe you could read to a neighbor or family member. There are many storybooks that talk about food. Look for them in your public library. What does the story tell you about food? What foods are included in the story? Try making up your own stories about food.

12. Investigate Careers in the Food Business

The food industry is the largest business in the United States. It includes production (growing and harvesting food), processing (preserving the food or changing it to another form), and marketing (buying and selling food). Arrange to visit with at least two people employed in the food industry. Ask them questions: How did you get the job? What's a typical workday like? What do you do? How were you trained? Then tell someone else about what you learned.
Children's Storybooks

One of the activities listed on the handout “12 Things Kids Can Do to Learn More about Food” is to read to younger children. Whether for your own enjoyment or for a younger child, storybooks are a great way to discover and talk about different foods. This list can get you started finding storybooks that emphasize parts of the Food Guide Pyramid. Add your own selections to the list and enjoy snacking through the pyramid by reading.

From cow to farmer to dairy to container—this storybook tells the journey of milk to your glass. Products made from milk are also shown. Talk about the variety of milk products and how you can include them in snacks or visit a local dairy farm or processing plant.

When a flipped pancake lands on Henry's head, his grandfather tells a fantastic and humorous tale about a town named Chewandswallow. It's a place where everyone's food falls from the sky, sometimes with pleasant results and other times disastrous. Talk about the variety of foods in the story, which ones you've eaten for snacks, or make up descriptions of other foods that could have fallen from the sky.

A brother and sister plant a garden with their sights set on winning a first prize at the 4-H club fair. The seeds all sprout, only to be eaten by various pests, all except one—a tomato plant that grows and grows and grows. Talk about planting a garden, list snacks to make with tomatoes, or plant several kinds of tomatoes.

A young boy is hungry but...the antelope won't pass the cantaloupe and the puffin won't pass the muffin, and on it goes until a solution is found. Talk about sharing snack foods and make up your own rhyming food phrases.

"One berry, two berry, pick me a blueberry"—rhymes that roll off your tongue fill this storybook. It reflects the author's fond childhood memories of picking wild berries for eating plain or in pies and jams. Talk about berries that grow locally and how to preserve them or make up your own rhyming fun.

While one brother works at making popcorn, the other brother reads interesting facts about it in this delightful blending of fact and fiction. Talk about the different ways to make popcorn and then make some!

Bold, colorful illustrations of 75 fruits and vegetables plus a glossary with descriptions and interesting facts about each distinguish this storybook. The A-Z feast includes both common and more exotic choices. Talk about the variety of fruits and vegetables and how and where they're grown or select several for a tasting party.

A family is preparing to celebrate Hanukkah but suddenly a blizzard traps them inside their home. The snow also covers the apples and potatoes they hoped to harvest for a traditional meal. In a surprising way the latkes and applesauce finally do make it to their table. A recipe for latkes and descriptions of other Hanukkah traditions are included. Talk about latkes and other cultural celebrations that involve certain foods or ways of eating.

From fat loaves for sale by the wall of the Old City of Jerusalem to sliced bread with peanut butter and jelly in the hands of a U.S. child, this photographic tour is a cultural feast. How it looks and how it's made may differ, but people all over the world eat bread. Talk about the many varieties of bread, have a tasting party, or bake some of your own.

Herbs, spices, and natural flavors are an important part of many recipes. Many are illustrated in A-Z fashion in this storybook. The artist's notes at the end of the book give more information about the detailed illustrations that convey the history and use of spices. Talk about seasonings used in recipes, compare tastes, or try growing your own herbs.

From asparagus to zucchini squash the authors share much information about planting a garden and growing vegetables. Talk about vegetables you’ve grown, list favorite vegetable snacks, or try making a container garden.


The pears are ready to pick, and Mr. Putter can’t wait to have pear jelly, but he can’t climb the tree as he used to be able to do. He’s stuck with an unsolvable problem until he remembers what fun he used to have with a slingshot. Talk about locally grown fruit, when to harvest it, and all the different fruit snacks you can enjoy.


Sandwiches make great snacks, and peanut butter sandwiches are an American favorite. Where do bread, peanut butter, and milk really come from? From farm to table, this storybook tells all about it. Talk about different kinds of sandwiches, discuss where foods come from, or make a sandwich snack.


Starting with a table set for thirty-one, this story delivers a frolicking good time from A to Z. Between asparagus soup and zucchini casserole you will find many foods at this alphabetical feast. Try sorting them into the Food Guide Pyramid, talk about ones to eat as snacks, or expand the alphabetical feast with your own lists of foods.


Almost every family had an apple orchard in the village of Pomme. When tragedy strikes, the village survives because a child who ate a magic apple is able to do something very special. Beautifully illustrated, this heartwarming tale is rich with apple lore and community traditions. Talk about varieties of apples and where they are grown or make favorite apple snacks.


One day Sombala Bombala Rombala Roh, a selfish iguana, secretly plants a giant mango seed. A tree grows, and then one day a big, ripe, juicy, giant mango appears. The fun begins in this lyrical tale as each of the island animals tries to help the iguana get the mango to the ground. Talk about the Caribbean and fruits that grow there, list fruits you enjoy eating, or have a fruit-tasting party.


Pablo’s parents own a bakery, and he is helping to make the pan dulce (Mexican sweet bread), empanadas de calabaza (pumpkin turnovers), chango bars, bagels, and challah (Jewish braided bread). He is also trying to decide what to take to the school for International Day. By telling about traditional foods, this warm family story celebrates the blending of Mexican and Jewish cultures. Recipes for chango bars and jalapeno bagels are included. Talk about the variety of breads, ones for everyday snacking, and ones for special occasions.


This whimsical tale begins with one big ripe strawberry. It’s filled with adventure and disguise and ends with one contented mouse. Talk about strawberries and other fruits and their textures and flavors or make some strawberry snacks.
Background Information
The Food Guide Pyramid puts the messages of the Dietary Guidelines into a picture. It emphasizes variety and moderation. No one food group is more important than another—for good health you need them all. The Dietary Guidelines are the best, most up-to-date advice from nutrition scientists.

The Pyramid Message

The Food Guide Pyramid suggests eating a variety of foods that together give you all the nutrients you need to maintain health without eating too much fat or sugar. It is not a rigid prescription but a general guide that lets you choose a healthful diet that is right for you.

The Pyramid Shape

The pieces of the pyramid represent both the basic five food groups and the extra fats, oils, and sweets that people commonly eat. The size of each piece indicates the relative amounts to eat. For example, grain, which forms the base, is the largest and has the greatest number of recommended servings.

Small triangle and circle shapes fill the top section of the pyramid. The triangles represent added sugars. The circles represent added and naturally occurring fat and oil. A scattering of these symbols throughout the pyramid indicates that some choices within the five food groups can also be high in fat or added sugars.

Selections from the food groups fit together like a puzzle to form a healthful overall diet. The first three pieces contain plant foods and should provide the majority of your food choices.

Piece 1: Grains

Choose plenty of grains. Bread, cereal, rice, and pasta form the broad base of the pyramid and should be eaten often. These foods contain lots of complex carbohydrates (starch) and provide many other nutrients as well. The exact mix of nutrients depends on the individual food selected. Whole grain products contain B vitamins and iron; others are often enriched or fortified with these nutrients. Whole grain products are good sources of fiber.

Piece 2: Vegetables

Vegetables contain vitamins, minerals, and fiber. They are naturally low in fat, but you will need to limit fat added during cooking and at the table. Choosing several different vegetables—dark green (spinach, broccoli), deep yellow (carrots, sweet potatoes), starchy (potatoes, corn), and others (tomatoes, lettuce)—will give you a wide variety of nutrients and possible health benefits.
**Piece 3: Fruits**

Fruits and fruit juices contain important vitamins and minerals. Fresh fruits are good sources of fiber. Choosing fruit canned or frozen in natural juices instead of heavy syrups will limit added sugar. Beverages labeled as “juices” contain more natural juice than those labeled as a “drink” or “cocktail.” Choosing several different fruits and juices will provide a wide variety of nutrients.

**Piece 4: Milk**

Milk products contain protein, vitamins, and minerals. Milk, yogurt, and cheese are the best sources of calcium (a mineral). To limit fat, choose nonfat or low-fat products.

**Piece 5: Meat**

Meat, poultry, and fish are rich sources of protein, B vitamins, iron, and zinc. The other foods in this group—dry beans, eggs, and nuts—also contain protein, vitamins, and minerals. To limit fat, choose lean meats and prepare them in low-fat ways (broil, roast, grill, stir-fry). Removing the skin from poultry is another low-fat cooking technique.

**Piece 6: Fats, Sweets**

The small tip of the pyramid represents the fats, oils, and sugars added to foods. Both sugar and fat provide calories. Foods such as butter, margarine, oil, and salad dressing are often added during cooking or at the table. To reduce unneeded calories, limit the amount you add to foods.

Other foods in this category such as soft drinks and candies are often eaten as snacks. It is all right to eat them once in a while, but they shouldn’t crowd out other foods that have more nutrients.

**Piecing It Together**

Remember to
- choose plant foods (grains, vegetables, and fruits) often.
- choose a variety of foods in each piece of the pyramid.
- choose lower-fat foods from each piece of the pyramid.
- choose lower-sugar foods from each piece of the pyramid.
- limit choices from the tip of the pyramid.
# Nutrients and What They Do

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Key Nutrients*</th>
<th>Action in the Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains (bread, cereal, rice, pasta)</td>
<td>Complex carbohydrate, fiber, iron, B vitamins (<em>niacin, riboflavin, thiamin, folic acid</em>)</td>
<td><strong>Carbohydrate</strong> is the body's major source of energy. <strong>B vitamins</strong> help in the body's use of energy. <strong>Fiber</strong> aids the movement of food through the digestive tract. <strong>Iron</strong> carries oxygen in red blood cells and muscle cells.</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Vitamin A, vitamin C, folic acid (a B vitamin), iron, magnesium, fiber</td>
<td><strong>Vitamin A</strong> helps maintain skin and mucous membranes and aids in vision. <strong>Vitamin C</strong> helps the body heal and fight infections. <strong>Folic acid</strong> is needed for healthy blood cells and is important for cell division such as in pregnancy and growth. <strong>Magnesium</strong> is found in bones and is important for muscle and nerve functioning.</td>
</tr>
<tr>
<td>Fruits</td>
<td>Vitamin A, vitamin C, potassium, folic acid (a B vitamin), fiber</td>
<td><strong>Potassium</strong> maintains the heartbeat, regulates body fluids, and is needed for muscle and nerve functioning.</td>
</tr>
<tr>
<td>Meat (meat, poultry, fish, dry beans, eggs, nuts)</td>
<td>Protein, iron, zinc, B vitamins (<em>thiamin, riboflavin, niacin, vitamin B-12</em>)</td>
<td><strong>Protein</strong> provides the building blocks needed for growth, replacement, and maintenance of body tissues. <strong>Zinc</strong> is necessary for healing, taste perception, growth, and sexual development.</td>
</tr>
<tr>
<td>Milk (milk, yogurt, cheese)</td>
<td>Calcium, riboflavin (a B vitamin), protein</td>
<td><strong>Calcium</strong> is needed for the development and maintenance of healthy bones and teeth. <strong>Riboflavin</strong> is a B vitamin that helps the body use energy.</td>
</tr>
<tr>
<td>“Use Sparingly” (not a food group)</td>
<td>Simple carbohydrates</td>
<td><strong>Simple carbohydrates</strong> or sugars provide energy but few other nutrients. <strong>Fat</strong> is a source of energy and helps in the absorption of certain vitamins.</td>
</tr>
</tbody>
</table>

*There are more than 40 different nutrients with many different functions that are required for good health. Many of these functions are interrelated. Each food group contributes many other nutrients in addition to the “key nutrients” listed here.

Adapted from Connie Liakos Evers, *How to Teach Nutrition to Kids* (Tigard, Ore.: 24 Carrot Press, 1995).
Nutrients and Health: Tips for Kids

Tip 1: Start with Breakfast
Breakfast gets you going after a long night without food. And it can help you do better in school. Many easy-to-make snacks such as Apple Cinnamon Toast, Cheese Quesadilla, or even leftover pizza are good breakfast choices.

Tip 2: Get Moving!
There are many ways to fit physical activities into your day. Walk, bike, or jog to see friends. Take a ten-minute activity break every hour when you read, do homework, or watch TV. Try to be active for at least 30 minutes every day.

Tip 3: Snack Smart
Snacks can keep you going. Choose foods that provide calcium, iron, and other nutrients, not just calories. If you pay attention to nutrients most of the time, you can have chips and candy for snacks occasionally.

Tip 4: Work Up a Sweat
Vigorous workouts—when you’re breathing hard and sweating—help your heart pump better, give you more energy, and help you look and feel your best. Start with a warm-up that stretches your muscles. Include 20 minutes of aerobic activity such as running, jogging, or dancing. Follow up with activities that help make you stronger such as push-ups or lifting weights. Then cool down with more stretching and deep breathing.

Tip 5: Balance Food Choices
A variety of foods are needed to get all the nutrients your body needs to function properly. You don’t have to give up high-fat foods like donuts and ice cream to eat healthfully. You just have to be smart about how often and how much of them you eat. Use the Food Guide Pyramid to help you balance your food choices.

Tip 6: Get Fit with Friends or Family
Being active is much more fun if you do it with friends or family. Encourage others to join you and plan one special event such as a bike ride or hiking with someone each week.

Tip 7: Eat More Grains, Fruits, and Vegetables
Grains, fruits, and vegetables give you carbohydrates for energy, plus vitamins, minerals, and fiber. There are lots of choices with many flavors and textures to enjoy that you may not have discovered. See how many different ones you can try in one month.

Tip 8: Join in Physical Activities at School
Structured activities are a fun way to feel good, look good, stay physically fit, and make new friends. Find out what activities your school has to offer. It doesn’t have to be a varsity sport. Maybe there are intramural sports or dance classes.

Tip 9: Avoid Labeling Foods Good or Bad
All foods have a place in a healthy diet. Balancing your choices is what’s important. Fit in a higher-fat food, like pepperoni pizza, by choosing lower-fat foods at other times. And don’t forget about moderation. If two pieces of pizza fill you up, you don’t need a third.

Tip 10: Make It Fun!
Eat foods you like and choose physical activities you enjoy doing. Be adventurous—taste new foods, learn to cook, and try new activities. You’ll grow stronger, play longer, and look and feel better!

Foods Produced in New York State

Agriculture is a major industry in New York State. Many foods are grown, produced, and processed here. Shoppers often have the choice of buying locally produced foods. Fruits and vegetables are usually the best buy during the peak of the season when they are the most plentiful. Some people believe that buying locally produced foods is good for the ecology and economy of their community and state.

Find out what foods are grown, produced, or processed in your county or community and in those that surround you. What foods could you add to this list?

Dairy Products
Milk, the leading agricultural product, is produced throughout the state. New York ranks third in the nation. New York ranks fourth in total cheese production. The state is first in cottage cheese, first in cream cheese, third in Italian cheese, and sixth in American cheese.

Many other dairy products are produced in the state, including butter, nonfat dry milk, ice cream, ice milk, and yogurt.

Dry Beans
The western part of the state is the major area for dry bean production, primarily red kidney and black beans. New York ranks eleventh in the nation for all types and fourth for red kidney beans.

Fruits
Apples—Production is greatest in three general areas of the state: along the southern shore of Lake Ontario; the Hudson Valley; and the Lake Champlain Valley. New York ranks second in the nation in apple production. More than half of the total apple crop consists of McIntosh, Rome, Red Delicious, and Empire varieties.

Grapes—New York ranks second in the nation in grape production, which is located in four general areas of the state: Lake Erie, Finger Lakes, Hudson Valley, and Long Island. Each area has unique grape-growing conditions, but all are on bodies of water that moderate the temperature year-round. Most of the grapes are used in juice and wine production. The Concord variety accounts for 70 percent of grape production.

Berries—Strawberries, blueberries, and red raspberries are the three top berry crops. New York ranks sixth in the nation for strawberries and tenth for blueberries. For other fruits, production and national rankings are as follows: sweet cherries, eighth; tart cherries, third; peaches, eighth; and pears, fourth.

Vegetables
New York ranks seventh in the nation for production of fresh market vegetables and ninth in processed vegetables. Principal fresh market vegetables include cabbage, carrots, cauliflower, cucumbers, lettuce, onions, snap beans, sweet corn, and tomatoes. Principal vegetables for processing include beets, cabbage, carrots, green peas, snap beans, and sweet corn.

Cabbage—Production is greatest in counties south of Lake Ontario. Cabbage is processed into sauerkraut or stored fresh for sale during the winter. New York ranks first in the nation for the fresh market, second in sauerkraut production.

Cauliflower—New York ranks third in the nation.

Corn—Production of sweet corn is greatest in the lower Hudson Valley and in the western and central parts of the state. New York ranks fourth nationally in production for the fresh market and fifth in processing.

Green peas—New York ranks fifth in production for processing.

Onions—Production is greatest in Madison, Orange, Orleans, Oswego, and Wayne Counties. New York ranks eighth in the nation.
Potatoes—Production is greatest on Long Island and in west-central areas of the state. New York ranks twelfth in the nation.

Snap Beans—Most of the snap beans are grown for the canning industry, and production is greatest in the central and western parts of the state. New York ranks fourth nationally in processing and seventh in the fresh market.

Tomatoes—Western New York is the primary area of production. Tomatoes are sold in both fresh and processed forms.

Meat, Poultry, Fish

Beef, pork, lamb, and veal—Production is scattered throughout the state.

Eggs—Production is scattered throughout the state but is greatest in Sullivan County. New York ranks twentieth in the nation.

Fish—A major portion of the fishing industry is concentrated on Long Island. Among the major products are clams, lobster, and flounder. In addition, aquaculture of tilapia, catfish, and trout is a growing industry in New York State.

Other

Maple syrup—New York ranks second in the nation.

Step-by-Step to Clean Hands

- Use warm water and soap to create a sudsy lather on your hands.
- Rub hands together for at least 20 seconds.
- Wash hands thoroughly. Work soapsuds in between fingers and around fingernails.
- Rinse the suds off your hands with warm water.
- Finally, dry hands completely on clean paper towels or your own personal towel. Shared towels may spread germs.

The 20-Second Handwashing Rap

( Words in heavy type carry the stronger beat.)

You gotta’ wash your hands, and
You gotta’ wash ‘em right,
Don’t give in to germs
Without a fight
Use water that’s warm
And lots of soapy bubbles,
These are your weapons
for preventing germ troubles.

Don’t cut your time short
your fingers—get between,
It takes twenty seconds
To make sure they’re clean

Gotta’ wash . . . gotta’ wash
Gotta’—wash—your—hands,
Gotta’ wash . . . gotta’ wash
Gotta’—wash—your—hands.

Source: Operation Risk (East Lansing: Cooperative Extension, Michigan State University, 1993).

When to Rewash Hands

- After using the bathroom
- After blowing your nose, coughing, or sneezing on your hands
- After touching pets
- After touching a cut or open sore
- After handling raw meat, fish, poultry, or eggs

More Tips for Safe Food Handling

- Pull long hair back away from the face.
- Bandage open cuts and sores on hands
- Keep counters clean with soap and water.
- Use clean washing and drying cloths.
- Wash knives, cutting boards, and any utensil used with raw meat, poultry, and fish before using them with other foods.

A Bit about Bacteria

Anyone who cooks must deal with an invisible enemy—bacteria—so microscopic that you can’t see, smell, or taste it. But bacteria also are so powerful they can cause severe sickness or even death. Anyone who handles food needs to know how to “Fight Bac.” That’s the slogan for a new public education campaign to prevent foodborne illness.

Bacteria are present naturally in foods. People who handle food can add bacteria by using unclean hands, cutting boards, utensils, countertops, and dish towels. Cleanliness keeps the amount of bacteria as low as possible. Fewer bacteria results in less risk of illness.

Bacteria do not grow well under 40 degrees F or above 140 degrees F. Thorough cooking helps to destroy bacteria in foods. For ground meat, that means cooking to at least 160 degrees F. Recipes that include raw eggs or partially cooked eggs should be avoided. Although bacteria can hitch a ride on any food, more perishable foods—meat, poultry, fish, eggs, and dairy products—require special attention.

Four Steps to Fight BAC

1. Clean: Wash hands and surfaces often.
2. Separate: Don’t cross-contaminate.
3. Cook: Cook to proper temperatures.
A successful cook needs to learn the language of cooking, especially when using written recipes. Specific words are used to describe ways of manipulating ingredients, and certain tools are used for the task. You don’t need many of the kitchen gadgets that are available, but some basic tools will make many tasks easier.

Measuring

Many recipes give instructions for measuring the amount of each ingredient. Sometimes measurements are not vital, such as the amount of carrots, cucumber, and lettuce in a tossed salad. For other recipes, however, such as muffins, careful measuring is very important.

- **counting** measure quantities of food such as six apples or one cucumber or use a timer to measure minutes or hours of cooking time.

- **volume of liquid ingredients** choose the appropriate size spoon or cup. To use a liquid measuring cup, place it on a flat surface and then move your body so that the correct measuring line is at eye level. Keep your eye on the line while pouring the liquid.

- **volume of dry ingredients** choose the appropriate size spoon or cup. Most dry ingredients should be spooned into the cup (without packing it down) and leveled off with a table knife. An exception is brown sugar, which is packed.

Tools to Use

- **liquid measuring cups** a clear glass or plastic cup with a spout that is marked (1 cup, 1/2 cup, and so on) to measure liquid ingredients.

- **dry measuring cups** a standardized set of cups (1 cup, 1/2 cup, 1/3 cup, 1/4 cup) used to measure dry ingredients.

- **measuring spoons** a standardized set of spoons (1 tablespoon, 1 teaspoon, 1/2 teaspoon, 1/4 teaspoon, 1/8 teaspoon) used to measure small amounts of either dry or liquid ingredients.

- **timer** a device for measuring cooking time.

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**Measuring Math**

For **dry and liquid ingredients**

- 3 teaspoons = 1 tablespoon
- 4 tablespoons = 1/4 cup
- 5 tablespoons + 1 teaspoon = 1/3 cup
- 8 tablespoons = 1/2 cup
- 16 tablespoons = 1 cup

For **liquids**

- 2 cups = 1 pint
- 4 cups = 1 quart
- 2 quarts = 1/2 gallon
- 4 quarts = 1 gallon

For **margarine or butter (stick form)**

- 2 sticks = 1 cup
- 1 stick = 1/2 cup
- 1/2 stick = 1/4 cup

**Common abbreviations**

- T = Tbsp = tablespoon
- t = tsp = teaspoon
- c = cup
Cutting

Many recipes call for prep work that involves cutting food into smaller pieces. Sometimes it's just a matter of what looks good. Other times a certain cutting technique will help to cook the food evenly or quickly.

- **Chop** to cut into irregularly shaped pieces.
- **Dice** to cut into cubes of the same size.
- **Mince** to chop very fine.
- **Slice** to cut into uniform slices.
- **Grate** to rub a food across the tiny punched holes of a grater.
- **Shred** to rub a food across the medium to large holes or slits of a grater.
- **Peel** to remove the skin from a fruit or vegetable.
- **Core** to remove the middle or core from a fruit.

### Tools to Use

- **Cutting board** made from wood or plastic and provides a safe surface on which to cut foods.
- **Knives** available in several sizes and styles to suit the cutting job: paring knife, slicing knife, chef's knife, carving knife, or serrated bread knife.
- **Pizza cutter** a tool with a circular blade designed to roll across a flat surface such as pizza or tortillas.
- **Peeler** a tool with special blades designed to remove the peel from fruits and vegetables.
- **Grater** a tool with various-sized holes used for grating and shredding foods such as cheese and vegetables.
- **Apple corer** a tool designed for inserting into apples to remove the core.
- **Can opener** a tool designed to open cans.

Mixing

There are many ways to mix ingredients together. Different words are often used to describe very similar tasks.

- **Beat** to move the spoon rapidly back and forth to blend ingredients until the mixture is very smooth.
- **Blend** to put the ingredients in a blender, food processor, or electric mixer and process until the mixture is smooth.
- **Combine** to mix or toss so that ingredients are evenly distributed.
- **Fold** to move the spoon or rubber scraper with a gentle over-and-under motion.
- **Mix** to combine ingredients so they are all evenly distributed.
- **Stir** to mix together with a spoon, often while food cooks in a pan on the stove.
- **Toss** to mix ingredients gently.
- **Whip** to beat rapidly using a circular motion to incorporate air into the mixture.

### Tools to Use

- **Mixing bowls** round-bottomed bowls in various sizes used for mixing foods.
- **Wooden spoons** spoons in various sizes for mixing and stirring ingredients.
- **Wire whisk** a tool designed for blending ingredients, particularly useful for rapidly incorporating air into a mixture.
- **Potato masher** a flat, perforated tool on a handle designed to mash foods such as potatoes.
- **Pastry brush** a soft brush used to spread food such as melted butter.
- **Spatula** a rubber spatula has a flexible rubber or plastic blade that is used to scrape bowls, pots, and pans and to fold ingredients together. A metal spatula has a long, narrow, flexible metal blade that is used to level off ingredients when measuring or to frost cakes. A wide spatula is used to flip pancakes or other foods.
Separating
Sometimes there is a need to separate components of food.

**drain** to separate liquid from solid.

**separate eggs** to separate the yolk from the white.

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Tools to Use

**colander** a large perforated bowl used for rinsing or draining food.

**strainer or sieve** a mesh-wire tool used for separating liquids from solids.

**hand juicer** a tool for squeezing juice from foods such as lemons or oranges.

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Heating Food

The appearance, texture, and flavor of food change when it is heated. Following are a few basic ways of cooking foods.

**bake** to cook in a conventional oven.

**boil** to heat a liquid to its boiling point or to cook a food in boiling liquid.

**microwave** to cook in a microwave oven.

**simmer** to heat a liquid to just below its boiling point or to cook in a simmering liquid.

**steam** to cook in the steam of boiling water.

**toast** to brown lightly in a toaster or oven.

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Tools to Use

**baking pan** a square, round, or rectangular pan used for cooking foods in the oven.

**baking sheet** a large rectangular pan with narrow or no sides.

**pizza pan** a large round pan with narrow sides.

**baking dish** a dish that can safely be used in a conventional oven.

**microwave dish** a dish that can safely be used in a microwave oven.

**saucepan or cooking pot** a pan with a tight-fitting lid used for general stovetop cooking.

**steamer basket** a perforated metal basket that fits into a saucepan for steaming vegetables or other foods.

**skillet or frying pan** a low-sided pan used for general stovetop cooking.
Cooking provides an excellent opportunity to teach children basic science, important life skills, and the basis of good nutrition. *A Pyramid of Snacks* is a collection of recipes and food activities to use with children ages 9 to 12 in informal, educational settings. Recipes, games, and science experiments engage children in active, investigative learning.

This teaching guide includes

- 16 snack recipes
- 12 games
- 12 science experiments
- 12 food activities
- 18 references to storybooks about snacks
- background information about nutrition and health, New York State foods, food safety, and cooking tools