## Appenuxxes



## Appendixes

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## APPENDIX 1:

Major Features of Food-Based Menu Planning: Comparing Traditional and Enhanced

## TRADITIONAL ENHANCED

## 1. Nutrition Goals

Menus must meet nutrition standard when averaged over a school week.

Same as Traditional

## 2. Nutrient Standards and Age/Grade Groups

## - For school-age students (K-12)

 LUNCH:There are two established age/grade groups: Grades K-3 and Grades 4-12. There is also an optional recommended age/grade group: Grades 7-12.

## BREAKFAST:

There is one established age/grade group: Grades K-12.

## - For pre-school children

LUNCH AND BREAKFAST:
There are two pre-school age groups:
Ages 1-2 years and Ages 3-4 years.

## - For school-age students (K-12)

LUNCH:
There are two established age/grade groups: Grades K-6 and Grades 7-12. There is also an optional recommended age/grade group: Grades K-3.

## BREAKFAST:

There is one established age/grade group: Grades K-12. There is also an optional recommended age/grade group: Grades 7-12.

## - For pre-school children

LUNCH AND BREAKFAST:
There are two pre-school age groups: Ages 1-2 years and Ages 3-4 years.

## TRADITIONAL <br> ENHANCED

## 3. Criteria for a Reimbursable Meal

Provides the required food components and food items in the correct serving sizes to meet the appropriate Traditional meal pattern.

- Four food components for lunch.
- Five food items for lunch.
- Three or four food components for breakfast.
- Four food items for breakfast.

Provides the required food components and food items in the correct serving sizes to meet the appropriate Enhanced meal pattern.

- Four food components for lunch.
- Five food items for lunch.
- Three or four food components for breakfast.
- Four food items for breakfast.


## 4. Meal Structure for Lunch

The following are minimum requirements for school-age students by age/grade group for each of the four components: Meat/Meat Alternate; Grains/Breads; Vegetables/Fruits; and Milk.

## - Meat/Meat Alternate:

Grades K-3: 1-1/2 oz.
Grades 4-12: 2 oz.
Optional (recommended) Grades 7-12: 3 oz .

## - Grains/Breads:

Grades K-3: 8 serv. per week; minimum 1 serv. per day

Grades 4-12: 8 serv. per week; minimum 1 serv. per day

Optional (recommended) Grades 7-12: 10 serv. per week; minimum 1 serv. per day

## - Meat/Meat Alternate:

Grades K-6: 2 oz.
Grades 7-12: 2 oz.
Optional (recommended)
Grades K-3: 1-1/2 oz.

## - Grains/Breads:

Grades K-6: 12 serv. per week; minimum 1 serv. per day

Grades 7-12: 15 serv. per week; minimum 1 serv. per day

Optional (recommended)
Grades K-3: 10 serv. per week;
minimum 1 serv. per day

## TRADITIONAL

## ENHANCED

## 4. Meal Structure for Lunch (continued)

## - Vegetables/Fruits:

At least two different fruits and/or vegetables must be offered.

Grades K-3: 1/2 cup per day
Grades 4-12: 3/4 cup per day
Optional (recommended)
Grades 7-12: 3/4 cup per day

## - Milk:

For all age/grade groups: 8 ounces fluid milk as a beverage

## - Vegetables/Fruits:

At least two different fruits and/or vegetables must be offered.

Grades K-6: 3/4 cup per day plus additional $1 / 2$ cup per week

Grades 7-12: 1 cup per day
Optional (recommended) Grades K-3: 3/4 cup per day

## 5. Meal Structure for Breakfast

The following are minimum requirements for school-age students by age/grade group for each of the three or four components: Meat/Meat Alternate and/or Grains/Breads; Juice/Fruit/Vegetable; and Milk.

## - Meat/Meat Alternate and/or Grains/Breads:

Grades K-12: Two servings of Meat/Meat Alternate (1 ounce per serving) or two servings of Grains/
Breads or one of each

## - Meat/Meat Alternate and/or Grains/Breads:

Grades K-12: Two servings of Meat/Meat Alternate (1 ounce per serving) or two servings of Grains/
Breads or one of each
Optional (recommended)
Grades 7-12: Same as Grades
K -12 plus one additional serving of Grains/Breads.

## TRADITIONAL <br> ENHANCED

## 5. Meal Structure for Breakfast (continued)

- Juice/Fruit/Vegetable:

Grades K-12: 1/2 cup

- Juice/Fruit/Vegetable:

Grades K-12: 1/2 cup
(Same for Grades 7-12, Optional)

## - Milk:

Grades K-12: 8 oz. fluid milk as a beverage or on cereal or both

- Milk:

Grades K-12: 8 oz. fluid milk as a beverage or on cereal or both
(Same for Grades 7-12, Optional)

## 6. Offer versus Serve for Lunch

Required for senior high Same as Traditional
schools.
High school students must take no fewer than three of the required five food items. They can choose which item(s) to decline.

Optional for lower grades.
(School food authorities decide whether to have OVS.)

## 7. Offer versus Serve for Breakfast

Optional for senior high
Same as Traditional
schools.
Optional for lower grades.
Students may decline one food item from any food component.

## TRADITIONAL <br> ENHANCED

## 8. Standardized Recipes

A record and copy of recipes
Same as Traditional
used must be available during
State nutrition review and nutrient analysis.

## 9. Processed Foods

A record of products used
Same as Traditional must be on file.

Child Nutrition label or other documentation will assist in determining food credit of food components and serving sizes.

Nutrition facts labels and/or manufacturer's nutrient data sheets will be needed during State nutrition review.

## 10. Production Records

Program regulations require
Same as Traditional
schools to keep food production
and menu records.

## 11. Child Nutrition Labeling

Child Nutrition (CN) labels on products show the product's contribution toward meal pattern requirements.

## APPENDIX 2:

Major Features of Nutrient-Based Menu Planning:
Nutrient Standard Menu Planning (NSMP) and Assisted NSMP
NSMP and Assisted NSMP use computerized nutrient analysis to plan menus. When averaged over a school week, this menu analysis must meet the nutrient standards for specific age/grade groups.

NSMP and Assisted NSMP are basically the same. With Assisted NSMP, however, an out-side consultant or other agency (such as the State agency or another school district) does the menu planning and nutrient analysis based on local preferences.

## 1. Nutrition Goals

Menus must meet nutrition goals when averaged over a school week.
Requires computerized nutrient analysis of planned menus for: nutrient standards based on the RDA (Recommended Dietary Allowances) for key nutrients; calories; and Dietary Guidelines measures. USDA-approved software must be used for the computerized nutrient analysis.

## 2. Nutrient Standards and Age/Grade Groups

Minimum of two established grade groups: Grades K-6 and Grades 7-12 (plus optional third group for Grades K-3). There are different nutrient standards for each of these three groups. Optional established age groups and nutrient standards: Ages 3-6, 7-10, 11-13, and 14 and older.

Optional customized age groups and nutrient standards.

## 3. Criteria for a Reimbursable Meal

Contains at least three menu items.
Contains the planned number of menu items in the planned portion sizes to meet the weeks nutrient standards.

Meets the nutrient standards for the appropriate grade or age groups when averaged over 1 school week's menu.

## 4. Meal Structure for Lunch

A minimum of three menu items must be offered: an entrée, milk, and at least one side dish.

- Offer an entrée: the entrée is a single food item or a combination of foods served as the main dish.
- Offer fluid milk as a beverage.
- Offer at least one side dish; may be any food item except a condiment or a food of minimal nutritional value that is not part of a menu item.
- Contains all planned menu items in the planned portions to meet the week's nutrient standard.


## 5. Meal Structure for Breakfast

A minimum of three menu items must be offered: milk and at least two side dishes.

- Offer fluid milk as a beverage or on cereal or both.
- Offer at least two side dishes; may be any food items except a condiment or a food of minimal nutritional value that is not part of a menu item.
- Contains all planned menu items in the planned portions to meet the week's nutrient standard.


## 6. Offer versus Serve for Lunch

Required for senior high schools. Optional for lower grades.

- Schools must offer students at a minimum three menu items: an entrée, fluid milk, and another menu item.
- Students must select at least two of the three menu items. One of the two menu items selected must be an entrée.
- If more than three menu items are offered as a meal unit, students may decline no more than two menu items of the meal unit. (Students can never decline the entrée.)


## 7. Offer versus Serve for Breakfast

Optional for all grade levels.
Students may decline a maximum of one menu item out of the three or more required menu items offered.


## 8. Standardized Recipes

Required for all menu items that have two or more ingredients or that require any preparation.

## 9. Processed Foods

Record of products used must be on file.
Nutrient analysis of product must be in the USDA database or entered into the local database.

## 10. Production Records

Program regulations require schools to keep food production and menu records.

## 11. Child Nutrition Labeling

CN Labeling does not apply to NSMP and Assisted NSMP because these systems do not use meal patterns. However, schools can serve CN-labeled products in meals planned with NSMP or Assisted NSMP.

## APPENDIX 3: Resource Materials

Appendix 3 provides information on a variety of resource materials available from: the U.S. Department of Agriculture's Food and Nutrition Service (FNS); the School Nutrition Association (SNA); the National Food Service Management Institute (NFSMI); the Food and Nutrition Information Center (FNIC); and the Healthy Meals Resource System Web site.

## 1. USDA Training and Technical Assistance Materials

USDA's Team Nutrition<br>3101 Park Center Drive, Room 632<br>Alexandria, VA 22302<br>Phone: (703) 305-1624<br>Fax: (703) 305-2549<br>Web site: teamnutrition.usda.gov<br>E-mail: teamnutrition@fns.usda.gov

Building Blocks for Fun and Healthy Meals, 2000, for child care centers.

Building Blocks is a menu planner containing information on the CACFP meal requirements, advice on serving high quality meals and snacks, menu planning, nutrition education ideas and tips, the Dietary Guidelines for Americans, the USDA Food Guide Pyramid, food safety facts, sample menus, and much more. It is available in .pdf format.
teamnutrition.usda.gov/Resources/buildingblocks.html

■ Changing the Scene - Improving the School Nutrition Environment, 2000, for the general public.
Changing the Scene is a tool kit is designed to help local people take action to raise awareness and improve their entire schools' nutrition environment. The kit includes brochures, presentations and scripts, checklists, handouts, sample letters, a video, and other items designed to address school environment issues that influence students' eating and physical activity practices. It is available in both kit format and .pdf format.
teamnutrition.usda.gov/Resources/changing.html

Choice Plus: A Reference Guide for Foods and Ingredients, 1996, for State Agencies and school food authorities.
Choice Plus is a 202-page reference manual designed to help school districts make informed decisions when purchasing food for school meals. The manual contains sample product descriptions, food buying, storage and preparation tips, information on the Dietary Guidelines for Americans, laws, standards and regulations. A complimentary piece to NFSMI's "First Choice" purchasing manual, the guide is available on-line in .pdf format.

## www.nfsmi.org/Information/choice_plus.htm

Choice Plus Food Safety Supplement, 2003, for school food authorities.
A supplement to Choice Plus: A Reference Guide For Foods and Ingredients, Choice Plus Food Safety Supplement provides information on how to apply food safety to the food purchasing process. This 35-page supplement discusses on-site visits to distributors, food recalls, safety language, food dating, manufacturer HACCP qualification standards, manufacturer audit survey, and estimated storage life of products, and other issues. It is available on-line in .pdf format.
www.nfsmi.org/Information/choice-plus-food-safety-supplement.pdf

■ Food Buying Guide for Child Nutrition Programs, 2002, for State Agencies and school food authorities.

The Food Buying Guide for Child Nutrition Programs is a 350+ page manual containing information on hundreds of new food items, yield data tables, updated meal pattern charts, and other tools designed to help school food authorities purchase food and to determine how those foods contribute to the overall meal pattern requirements. It also contains appendices covering recipe analysis, USDA's Child Nutrition Labeling Program, the purchasing process and available technical resources. This guide is available on-line in .pdf format.
teamnutrition.usda.gov/Resources/foodbuyingguide.html

■ Fruits \& Vegetables Galore: Helping Kids Eat More, 2004, for schools and school districts.

Fruits \& Vegetables Galore is a 3-notebook, 284-page kit that includes tips on planning, purchasing, preparing, presenting and promoting fruits and vegetables. Quality Foods for Quality Meals provides information on purchasing quality produce. Meal Appeal provides important tips on promoting fruits and vegetables. Tricks of the Trade includes tips on creating different kinds of salad bars and includes training CDs (WIN and MAC) for your staff. The kit can be used to help rejuvenate your cafeteria with colorful fruits and vegetables and get students excited about eating healthfully. It can be ordered on-line in print format and downloaded in .pdf format.
teamnutrition.usda.gov/Resources/fv_galore.html.

■ MyPyramid Resources

- Anatomy of MyPyramid, (2005) -- This 8-1/2" x 11 " version of the MyPyramid symbol can be used to teach MyPyramid's key concepts. Available in print and .pdf format.
- MyPyramid Mini Poster (2005) -- This $8-1 / 2 "$ x 11 " version of the MyPyramid poster has the graphic on one side and healthy eating messages on the reverse side. Available in print and .pdf format.
- MyPyramid Poster (2005) -- This 25" x 33" poster contains the new MyPyramid graphic and healthy eating messages. The graphic identifies the five food groups and provides healthy eating messages relating to each of these groups. Available in print format.
- MyPyramid for Kids Poster (2005) -- A 24 " x 36 ", double-sided poster of MyPyramid for Kids is suitable for young children and highlights a simplified MyPyramid for Kids graphic. The other side, appropriate for more advanced students, features both the MyPyramid for Kids graphic and healthy eating and physical activity messages. Available in print format and .pdf format.
- MyPyramid for Kids: A Close Look (2005) -- This $8 \frac{1}{2}$ " x 11 " flyer is a step-by-step explanation of the key concepts of the MyPyramid for Kids symbol. Available in .pdf format.
- MyPyramid Blast Off Game (2005) -- This interactive computer game reinforces the key concepts of MyPyramid for Kids. Students can reach Planet Power by fueling their rocket with food and physical activity. "Fuel" tanks for each food group help students keep track of how their choices fit into MyPyramid. Available for play online, or as a download.
- MyPyramid for Kids Classroom Materials (2005) - Educational materials developed at the elementary school level to help children learn the MyPyramid food guidance system. The lesson plans (in booklet form)for teachers are available in three levels: Level 1 (grades 1-2, 18 pages); Level 2 (grades 3-4, 18 pages); and Level 3 (grades 5-6, 24 pages). Each lesson p lan also includes two CDs: one containing the MyPyramid Blast Off Game; the other containing reproducibles, music, and tip sheets. Available in print and .pdf format.
- MyPyramid for Kids Coloring Page (2005) -- This is an $8-1 / 2$ " x 11 " black and white line art version of the MyPyramid for Kids symbol for kids to color. Available in .pdf format.
- Tips for Families (2005) -- MyPyramid for Kids graphic and messages on one side and eating and physical activity tips on the other. This $8-1 / 2$ " $\times 11$ " flyer is packaged in sets of 25 and is available to schools, child care providers, and parent organizations. Available in print and .pdf format, in English and in Spanish.
- MyPyramid for Kids Worksheet (2005) -- This 8 1/2 "x 11" worksheet helps kids track how their food choices match up to the recommendations of MyPyramid. Kids can also set a food and activity goal for the next day. Available in .pdf format.
teamnutrition.usda.gov/kids-pyramid.html or teamnutrition.usda.gov/library.html

Nutrient Analysis Protocols: How to Analyze Menus for USDA's School Meals Programs, 2004, for State Agencies and school food authorities.
This 132-page manual establishes procedures for conducting an accurate nutrient analysis, developed for school food authorities conducting their own nutrient analysis and for State agencies conducting SMI reviews. It is available in CD and .pdf format.
teamnutrition.usda.gov/Resources/nutrientanalysis.html

Offer versus Serve, 2004, for State Agencies and school districts.
This 326-page training resource contains training for traditional food-based, enhanced food-based and nutrient standard menu planning. The manual also contains a resource pack with a reference guide, a CD of print materials, and a film overview of each menu-planning option in VHS and DVD formats. It is available only in .pdf format.
teamnutrition.usda.gov/Resources/offer_v_serve.html

The Road to SMI Success - A Guide for School Foodservice Directors, 2005, for State Agencies and school food authorities

This manual provides guidance to school foodservice directors, supervisors, and managers on successfully implementing USDA's School Meals Initiative for Healthy Children (SMI) within the scope of daily practices. It includes information on menu planning options, daily foodservice practices and tips to meet nutritional requirements for school meals, Team Nutrition, and preparing for an SMI review. It is available in CD and .pdf format.
teamnutrition.usda.gov/Resources/roadtosuccess.html.

Serving It Safe: A Manager's Tool Kit, Second edition, 2003, for school food authorities

This 119-page manual describes why food safety is important and gives guidance on how foodservice personnel can assure the preparation and service of safe foods. Provides information based on the 2001 Food Code. Serving it Safe is available in .pdf format, in English and in Spanish.

## www.nfsmi.org/Information/sisindex.html

■ Serving It Safe Instructor Guide, 2nd Edition, 2004, for School Food Authorities
This 102-page reference manual and a course book contain a series of ten 2-hour training sessions on food safety issues. It is available in .pdf format, in English and in Spanish.
www.nfsmi.org/Information/sis_ig.html

Serving It Safe Interactive CD-ROM, 2nd Edition, 2004, for School Food Authorities
This interactive self-paced computer-based instruction program is designed to help school foodservice professionals understand the importance of practicing safe food handling techniques. Eight tutorials present basic food safety concepts, using real-life scenarios to emphasize application of the concepts. It may be used to supplement information from the manual and instructor guide for Serving It Safe, 2nd Edition. The CD is available for purchase from NFSMI.
www.nfsmi.org/Information/sisindex.html , or call 1-800-321-3054

Serving It Safe Poster, 2004, for school food authorities.
The $25-1 / 2$ " $\times 33$ " poster reinforces the importance of safe food practices and precautions at each phase of food production. The poster can be displayed in the food preparation area or another convenient location. Available in .pdf format, in English and Spanish.

## www.nfsmi.org/Information/sisindex.html\#sis_poster

USDA Recipes for Child Care, 2003, for child care programs and State Agencies.
This recipe resource has been updated to reflect the changes made in the 2001 Food Buying Guide for Child Nutrition Programs. The 85 revised recipes have been standardized, edited for consistency, analyzed for nutrient content, and updated with Child Care Program information based on the 2005 Food Code Supplement. They are available only on-line in a .pdf format
www.nfsmi.org/Information/cc_recipe_index_alpha.htm

USDA Recipes for Schools, 2006, for school food authorities.
Recipes from 1988 Quantity Recipes for School Food Service and 1995 Tool Kit for Healthy School Meals have been updated based on the 2001 Food Buying Guide for Child Nutrition Programs. Revised recipes have been standardized, edited for consistency, and updated with CCP information based on the 2003 Food Code Supplement. Available in print format and .pdf format.
teamnutrition.usda.gov/Resources/usda_recipes.html
(Order print version; Introduction only in .pdf)
www.nfsmi.org/Information/school_recipe_index_alpha.html (recipes in .pdf).

## 2. School Nutrition Association (SNA) Materials

School Nutrition Association<br>700 South Washington Street, Suite 300<br>Alexandria, VA 22314-3436<br>(703) 739-3900 and 1-800-728-0728 (SNA's Emporium)<br>Fax: (703) 739-3915<br>Web site: www.schoolnutrition.org<br>E-mail: servicecenter@schoolnutrition.org

$\square$ Keys to Excellence in School Food and Nutrition Programs, 2005, for school food authorities.

Keys to Excellence is an on-line self-assessment tool completed on the SNA web site. This program assists schools in achieving nutrition integrity goals at the administrative, management, nutrition, nutrition education, and operational levels. This on-line tool, through its standards of quality, provides a framework for continuous program review, evaluation, and improvement. It is only available on-line.
www.schoolnutrition.org/KEYS.aspx?ID=1158

Healthy Edge: Building Healthy School Meals, 2000, for child nutrition professionals
Healthy Edge: Building Healthy School Meals is an on-line professional development program providing nutritious meal instruction. The on-line modules were developed to help child nutrition professionals provide safe, healthy school meals that kids will enjoy, while teaching children the value of good nutrition and promoting a healthy lifestyle. There are four modules on nutrition, nutrition education, preparing and serving healthy school meals, and building partnerships and marketing. The program is an approved course for any professional seeking SNA certification and provides 10 credit hours of continuing education. Access to the program costs $\$ 50.00$.
www.schoolnutrition.org/Index.aspx?id=1093

## 3. National Food Service Management Institute (NFSMI) Materials

National Food Service Management Institute<br>6 Jeanette Phillips Drive, PO Drawer 188<br>University, MS 38677-0188<br>Phone: (662) 915-7658 or (800) 321-3054<br>Fax: (662) 915-5615 or (800) 321-3061<br>Web site: www.nfsmi.org<br>E-mail: nfsmi@olemiss.edu

Basics at a Glance Poster, 2002, for school food service professionals.
Basics at a Glance is a colorful 17" x 22 " poster includes recipe abbreviations, equivalent volumes and weights, scoop sizes, pan size/capacity chart, cutting diagrams for portioning, and metric equivalents.
www.nfsmi.org/Information/basicsindex.html


Building Quality Meals: Standardized Recipes and Portion Control, 2000, for school food service assistants and technicians.

Building Quality Meals: Standardized Recipes and Portion Control is a 60 -minute satellite seminar video provides an opportunity for Child Nutrition Program personnel to better understand standardized recipes, culinary terms, weighing and measuring, portion control techniques, and recipe modification to prepare quality meals. The video and participant handouts are available on-line.
www.nfsmi.org/Education/Satellite/ss21/partic.pdf

Culinary Techniques: Cooking with Flair CD-ROMs, 2002, for school food service assistants.

Culinary Techniques are a series of interactive, self-paced, computer-based instructional programs includes interactive learning activities, glossary, recipes, video clips, activity index, and links to resources on the Web. Maintaining food quality is a consistent theme in all three programs. One copy may be loaded on multiple computer hard drives or on a network and is available on-line.

## www.nfsmi.org/interactive/culindex.html

- Culinary Techniques: Cooking with Flair - Breads and Grains Program

This module teaches preparation techniques for yeast breads, quick breads, cakes, pasta, rice, and grains. Food science, chemistry, mathematics, history, and mechanical concepts make it appropriate for a multi-disciplinary classroom.

- Fruits, Salads, Vegetables Program

This module includes activities which reinforce food handling and preparation practices that maintain food quality and emphasize proper storage, preparation, and presentation techniques of fresh fruits and vegetables.

- Meats and Other Protein Foods Program

This module teaches preparation techniques for meats, fish, and poultry; legumes, nuts, and seeds; cheese, yogurt, and eggs; and processed products and emphasizese food safety, importance of following directions, and special characteristics of cuts of meat.

■ First Choice: A Purchasing Systems Manual for School Food Service, 2nd Edition, 2002, for Child Nutrition Professionals

This reference manual provides child nutrition professionals with a resource to guide procurement procedures. It updates procurement information and integrates food safety information to assist purchaser in establishing procedures to assure receipt of a safe product. Includes steps in purchasing, regulations, market place environment, product movement, bid units, specifications, brand approval, obtaining prices, monitoring cost, product testing, receiving and storage, and purchasing cooperatives. It is available on-line in a .pdf format.
www.nfsmi.org/Information/firstchoice/fcindex.html

■ First Day...Every Day: Basics for Food Service Assistants, Part I, 1997, for school food service assistants, managers and administrators.

This is a 60 -minute satellite seminar video is designed to help food service assistants perform their jobs safely and efficiently. Topics include personal and professional development, food safety and sanitation, HACCP, and accident prevention. The video and participant handouts are available on-line.

Video available at www.nfsmi.org/Education/Satellite/tt1097/satinfo.html Handouts available at www.nfsmi.org/Education/Satellite/tt1097/tt1097.pdf

■ First Day...Every Day: Basics for Food Service Assistants, Part II, 1998, for school food service assistants, managers, and administrators.

Second in the series, this 60-minute satellite seminar video is designed to help food service assistants perform their jobs safely and efficiently. Topics include weights and measures, portion control, production schedules, recipe adjustment, and equipment safety. The video and participant handouts are available on-line.

Video available at www.nfsmi.org/Education/Satellite/tt0498/satinfo.html Handouts available www.nfsmi.org/Education/Satellite/tt0498/tt0498.pdf

- Focus on the Customer, 2003, for school nutrition teams.

Breakfast Lunch Training (BLT) module designed for training school nutrition teams to focus on the customers' wants and needs to develop strategies for achieving satisfied customers and effective programs. BLT contains seven lessons averaging 75 minutes each, 25 -minute video, participant handouts, transparency masters, and PowerPoint ${ }^{8}$ presentation. The video and manual are available on-line.

## www.nfsmi.org/Information/blt2003index.html

Food Buying Guide for Child Nutrition Programs Instructor Manual and Participant Workbook, 2005, for school food service personnel.

The Food Buying Guide Instructor Manual and Participant Workbook are designed for training school food service personnel to accompany the Food Buying Guide. The colorful resource materials follow the Food Buying Guide layout for training with PowerPoint® presentation, worksheets, and activities for each Food Buying Guide section. Additional sections on basic math review, real world activities, worksheets for reproduction, and Web site resources are included. It is available for download in PowerPoint format and in .pdf format.
$w w w . n f s m i . o r g / I n f o r m a t i o n / f b g i n d e x . h t m$.

■ Food Quality: Making the Grade in Child Nutrition, Part I, 1999, for school food service personnel, cooks, assistants, technicians, directors and managers.
www.nfsmi.org/Education/Satellite/ss17/satinfo.html

■ Food Quality: Making the Grade in Child Nutrition, Part II, 1999, for school food service personnel, cooks, assistants, technicians, directors and managers.
www.nfsmi.org/Education/Satellite/ss19/satinfo.html

Food Safety Mini-Posters, 2000, for school food service cooks, assistants, technicians, directors and managers.
Fourteen colorful $81 / 2$ " x 11 " mini-posters printed in English on one side and Spanish reverse side. Topics include hand washing, personal appearance and hygiene, storage, temperatures, and preparation. Posters are designed for use in the food preparation and service areas. Available in .pdf format.
www.nfsmi.org/Information/postindx.htm

Food Safety Standard Operating Procedures (SOPs), 2005, for school food service professionals/trainers.

Food Safety SOPs are written practices and procedures and are the basic ingredient to producing safe food. It is essential to train employees and emphasize the importance of following the procedures. Available in Word or .pdf format.
sop.nfsmi.org/HACCPBasedSOPs.php

■ Food Service Assistant...you are important, 2004, for school food service assistants.
This Breakfast Lunch Training (BLT) module focuses on the important role of the food service assistant and the skills needed to achieve School Nutrition Program goals. The training modules consist of four lessons averaging 30 minutes each. They include a BLT course manual and movie clips containing introduction and closing segments and four parts related to each lesson topic. Each part provides content essential to achieving the two objectives of each lesson. The handouts and video are available on-line, in English and in Spanish.
www.nfsmi.org/Information/blt2004index.html

■ Go for the Gold with Customer Service, 1994, for Child Nutrition administrators.
This Breakfast Lunch Training (BLT) module is designed to help CNP administrators improve customer service. It provides information on quality food, marketing, attractive serving lines, communication skills, and how to meet customer needs and wants. It includes an instructor handbook and four lessons with activities and handouts, and is available on-line in .pdf format.
www.nfsmi.org/Information/go_for_the_gold/pdf_list.htm

■ Healthy Cuisine for Kids Training, 2005, for Child Nutrition professionals /trainers.
Healthy Cuisine for Kids Training is a hands-on training program designed for food service staff to be presented by the manager or other trainer. Its focus is on the development of culinary techniques that support the implementation of the Dietary Guidelines for Americans. Materials include a Trainer's Manual, a Participant's Manual, a Culinary Manual, and a Train-the-Trainer Manual. They are available on-line for download.
www.nfsmi.org/Information/hck/hck.htm

■ Measuring Success with Standardized Recipes, 2002, for school food service and Child Care managers and employees.

This training package addresses the benefits of using and developing standardized recipes. It is designed to assist school food service and child care managers and employees with development and use of standardized recipes in their operations. Materials include manual, video, and revised Basics at a Glance poster. Video, manual and handouts available on-line.
www.nfsmi.org/Information/measuring-success.html

Nutrition 101: A Taste of Food and Fitness, 2005, for school food service professionals.

The 2005 Breakfast Lunch Training (BLT) Module, Nutrition 101: A Taste of Food and Fitness, provides a basic overview of nutrition. The module incorporates a variety of learning activities to engage participants on a personal level. Learning objectives for each lesson are achieved through completion of all lesson components. Lessons are designed to be completed within 30 minutes. The video and materials available on-line.
www.nfsmi.org/Information/blt2005index.htm

Nutrition Decision, 2005, for students.
This interactive Web site is designed to engage adolescents in activities that teach the importance of making healthful eating decisions and promote physical activity.
Nutrition Decision is available on-line only.
www.nutritiondecision.org/

■ Real-Time Marketing, 2001, for Child Nutrition personnel, managers, directors, and State agency staff
Real-Time Marketing is a 60-minute satellite seminar video provides an opportunity for Child Nutrition Program personnel to better understand The Four Ps of Marketing - Price, Product, Promote, and Place. It provides suggestions on creating a marketing plan and communicating with customers about products and services. The video and materials are available on-line.
www.nfsmi.org/Education/Satellite/ss26/partic.pdf

■ School Breakfast: A Smart Way to Start the Day, 2003, for Child Nutrition personnel, school food service assistants, managers, directors, State Agency staff, teachers, and school administrators.
This 50-minute satellite seminar video discusses the link between eating breakfast and classroom success, defines a USDA reimbursable breakfast, identifies new menu ideas, describes creative ways to market the School Breakfast Program, and suggests ideas for promoting breakfast. Includes an 8-minute Start Smart - Do Breakfast Every Day video (also available separately) to use in promoting the breakfast program to administrators, teachers, and community groups. The video and handouts are available on-line.
www.nfsmi.org/Education/Satellite/ss34/partic.pdf

■ School Breakfast for First Class Learning Toolkit, 1999, for school food service professionals/trainers.
This toolkit contains materials to assist in promoting and operating a school breakfast program. The manual contains three sections: Value of Breakfast, How to Implement a School Breakfast Program, and Enhancing School Breakfast Programs, and the lessons include handouts and evaluation. The toolkit is available on-line in .pdf format.
schoolmeals.nal.usda.gov/Training/5startoolkit/firstclass.html

## 4. Food and Nutrition Information Center (FNIC)

## Food and Nutrition Information Center

National Agricultural Library, Room 105
10301 Baltimore Boulevard
Beltsville, MD 20705-2351
Phone: (301) 504-5719
Fax: (301) 504-6409
Web site: fnic.nal.usda.gov/
E-mail: fnic@nal.usda.gov

The Food and Nutrition Information Center (FNIC) is a leader in food and human nutrition information dissemination that was established in 1971. FNIC provides credible, accurate, and practical resources for nutrition and health professionals, educators, government personnel and consumers. A variety of on-line and library resource materials are available from FNIC.
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## 5. Healthy Meals Resource System

Healthy Meals Resource System<br>Food and Nutrition Information Center<br>National Agricultural Library, Room 105<br>10301 Baltimore Boulevard<br>Beltsville, MD 20705-2351<br>Phone: (301) 504-5719<br>Fax: (301) 504-6409<br>Web site: healthymeals.nal.usda.gov<br>E-mail: hmrs@nal.usda.gov

The Healthy Meals Resource System includes an on-line Education and Training Materials Database, a searchable collection of training materials for school nutrition personnel; several on-line discussion groups for specific target audiences, including "Mealtalk"; and food safety information. The Web site also includes a cooperative program that includes a directory of Chefs that are willing to work with school personnel, industry partnerships with USDA that provide for cooperative efforts and software vendors for nutrient analysis.

## APPENDIX 4:

## Grains/Breads Instruction

## Grains/Breads Component for the Child Nutrition Program:

All reimbursable meals offered under the food-based menu planning approaches in the National School Lunch Program (NSLP), Child and Adult Care Food Program (CACFP), and Summer Food Service Program (SFSP) must include grains/breads food product(s). A reimbursable school breakfast in the School Breakfast Program (SBP) and a reimbursable supplement in the CACFP or an Afterschool Snack may contain a grains/breads component.

FNS meal pattern regulations establish the minimum serving size(s) of grains/breads required for breakfasts, lunches, suppers, and supplements (snacks). Meal pattern charts for each of the Food-Based Menu Planning are on pages 38 through 51.

Additional information regarding definitions, credibility, and serving sizes for grains/breads is available in the Food Buying Guide for Child Nutrition Programs at
teamnutrition.usda.gov/Resources/foodbuyingguide.html.

## I. Criteria for Determining Acceptable Grains/Breads Under the Food-Based Menu Planning Approaches

The following criteria are to be used as a basis for crediting items to meet the grains/breads requirement under the food-based menu planning approaches:
A. All grains/breads items must be enriched or whole grain, made from enriched or whole-grain meal and/or flour. If using a cereal it must be whole grain, enriched, or fortified. Bran and germ are credited the same as enriched or whole-grain meal or flour.
B. The label must indicate that 1) the food product is enriched or whole grain, made from enriched or whole-grain meal and/or flour, bran, and/or germ, or 2) the cereal is whole grain, enriched, or fortified. If the food product is enriched, it must meet the Food and Drug Administration's standards of identity (21 CFR Part 136, Part 137, Part 139) for enriched bread, macaroni and noodle products, rice, or cornmeal.
C. The food product must be provided in quantities specified in the appropriate program regulations. One-quarter ( $1 / 4$ ) of a serving is the smallest amount allowable to be credited toward the minimum quantities of grains/breads specified in program regulations.

## II. Examples of Foods That Qualify as Grains/Breads:

Foods that qualify as grains/breads in the Child Nutrition Programs are enriched or whole grain, or are made from enriched or whole-grain meal and/or flour. Bran and germ are credited the same as enriched or whole-grain meal or flour. Such foods include, but are not limited to:
A. Breads that are enriched or whole grain or made from enriched or whole-grain meal and/ or flour, bran, and/or germ.
B. Biscuits, bagels, rolls, tortillas, muffins, or crackers made with enriched or whole-grain meal and/or flour, bran, and/or germ.
C. Cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat, or couscous that are enriched, whole grain, or fortified.
D. Ready-to-eat breakfast cereals that are enriched, whole grain, or fortified.
E. Cereals or bread products that are used as an ingredient in another menu item such as crispy rice treats, oatmeal cookies, or breading on fish or poultry when the cereal or bread ingredients are enriched or whole grain, or when the cereal is fortified.
F. Macaroni or noodle products (cooked) made with enriched or whole-grain flour.

Program regulations for the NSLP and the SFSP allow enriched macaroni products that have been fortified with protein to be counted to meet either a grains/breads or meat/meat alternate requirement, but not as both components in the same meal.
G. Sweet food products such as toaster pastries, coffee cake, doughnuts, sweet rolls, cookies, cakes, or formulated grain-fruit products (authorized under Appendix A of 7 CFR Part 220) when made with whole grain, enriched or whole-grain meal and/or flour, bran, and/or germ and served, as permitted under Exhibit A. When sweet food products are permitted, no more than one sweet grains/breads serving per day may be a dessert, and sweet snack food products should not be served as part of a supplement (snack) more than twice a week.
H. Pie crust when made with enriched or whole-grain meal and/or flour and served, as allowed under Exhibit A.
I. Non-sweet snack food products such as hard pretzels, hard bread sticks, and tortilla chips made from enriched or whole-grain meal and/or flour.

## III. Criteria for Determining Serving Sizes

There are two different ways to determine the portion size required to provide one grains/ breads serving: by using Exhibit A of FNS Instruction 783.1, Rev 2, or by calculating the grams of creditable grains.

## A. Determining Serving Sizes Based on Exhibit A (attached):

One grains/breads serving for commonly available food products can be determined using Exhibit A of the FNS Grains/Breads Instruction. The wide variety of prepared grains/breads food products listed in Exhibit A are grouped based on their average grain content. Food types having similar concentrations of creditable grains are grouped together. Each group in Exhibit A provides the minimum serving size needed to supply one full grains/breads serving. Use Exhibit A for products that are whole grain, enriched, or fortified (if a cereal), or for products that have a creditable grain as the primary grain ingredient.
The weight needed for the different groups of grains/breads food products to provide one grains/breads serving is different since different types of grains/breads food products have different concentrations of enriched or whole-grain meal and/or flour, bran, and/or germ.

## 1. Exhibit A, Groups A-G:

For the types of food products listed in Groups A-G, one grains/breads serving provides not less than 14.75 grams of enriched or whole-grain meal and/or flour, bran, and/or germ. The serving sizes (weights) given in Exhibit A, Groups A-G, may be used for grains/breads food products that are either commercially purchased or prepared on-site.
Food products that are labeled whole grain or enriched, and food products that have a
creditable grain as the primary grain ingredient should provide the minimum of 14.75 grams of creditable grains per serving (without obtaining manufacturers documentation) as long as the minimum serving sizes (weights) given in Exhibit A are met. If the product is not whole grain or enriched, or does not have a creditable grain for the primary grain ingredient, you must obtain manufacturer's documentation showing the amount of creditable grain(s) in one portion of the product. Once documentation is obtained, calculate the serving size based on the grams of creditable grains as shown in step B.
Exhibit A, Groups A-G provides the weight needed for $1 / 4,1 / 2$, and $3 / 4$ of a grains/breads serving in addition to the weight needed for one grains/breads serving.

## 2. Exhibit A, Groups H \& I:

For the types of food products listed in Groups H and I of Exhibit A to count as one grains/ breads serving, the weights and volumes listed therein must be met.
When items in Groups H and I are served as cooked or cold breakfast cereals (such as cooked oatmeal, cooked millet, cooked rice served with milk and sugar, or cold cereal) or cooked pasta, the weights and volumes listed in Exhibit A, groups H or I must be used as noted. For example, the serving size required for one grains/breads serving of cooked oatmeal made from dry oats is $1 / 2$ cup cooked or 25 grams dry oats.

There is an exception to the equivalency of one grains/breads serving for Group H as stated in Exhibit A. For the School Breakfast Program only, the traditional or enhance d meal patterns, grades $K-12$, and the enhanced meal pattern option for grades $7-12$, by regulation, one grains/breads serving of cooked and ready-to-eat (cold dry) breakfast cereal is 3/4 cup or 1 ounce. This means $3 / 4$ cup or 1 ounce (whichever is less) for cold dry cereal, or $3 / 4$ cup cooked cereal, count as one grains/breads serving. This serving size is different from the equivalency of one grains/breads serving of $1 / 2$ cup cooked given in Exhibit A, Group H.

Some of the food products in Group H, such as dry oatmeal or cornmeal, may be used as a grain ingredient in a recipe as well as a cooked cereal. When the cereal grain items listed in Group H are used as an ingredient in a recipe such as oatmeal bread or cornmeal muffins (in contrast to being used as a cooked breakfast cereal) do not use the amounts listed in Group H. In this case, one grains/breads serving should be determined using the weights given in Groups A-G of Exhibit A corresponding to the appropriate food group, or calculated using 14.75 grams of the creditable grains in one portion of the recipe.

For example, the credit for oatmeal bread made using dry oats may be determined by two ways: 1) using the serving weight in Group B of Exhibit A which contains "bread" since the food type is now "bread," or 2) using the information in "B" below to determine the serving size needed to provide 14.75 grams of creditable grains.

## B. Determining Serving Sizes Based on Creditable Grains Content:

There are several situations where the creditable grains content would be used to calculate the serving size instead of using the serving weights given in Exhibit A. Some of these situations are: 1) a product is not whole grain, enriched, or fortified (if a cereal) and the primary grain ingredient is not a creditable grain but there are creditable grains in the product; 2) a manufacturer claims that a product can provide the minimum of 14.75 grams of creditable grains per portion using a serving size less than the weights given in Exhibit A; 3) a product is made on site and you choose to calculate the serving size based on grams of creditable grains instead of using Exhibit A; or 4) a food product does not fit into one of the groups of Exhibit A.

In the above cases, the menu planner will need to document or obtain documentation showing the weight of creditable grain(s) content of the grains/breads item. This will be easy for grains/breads items prepared on site, since the exact weight of the creditable grain(s) ingredient can be documented based on the recipe. For purchased products, the manufacturer will need to be contacted to obtain the required documentation showing the weight of creditable grain(s) per portion contained in a specific food product. Be aware that some manufacturers will not provide this information if they consider it proprietary information. If you have a situation where documentation is required, but the manufacturer cannot supply the documentation, you cannot use that product as a credited grains/breads component of a reimbursable meal.

When the exact or minimum amount of creditable grains can be documented, the grains/ breads serving for any grains/breads product found in Groups A through G may be calculated using 14.75 grams of creditable grains as one grains/breads serving. For manufacturer's documentation which provides the gram weight of creditable grain(s) per portion, you will want to use the worksheet available in the Food Buying Guide for Child Nutrition Programs to determine the amount creditable.

FCS INSTRUCTION 783-1
REV. 2
EXHIBIT A

## GRAINS/BREADS FOR THE FOOD-BASED MENU PLANNING ALTERNATIVES IN THE CHILD NUTRITION PROGRAMS ${ }^{1}$

| GROUP A | MINIMUM SERVING SIZE FOR GROUP A |
| :---: | :---: |
| - Bread type coating <br> - Bread sticks (hard) <br> - Chow mein noodles <br> - Crackers (saltines and snack crackers) <br> - Croutons <br> - Pretzels (hard) <br> - Stuffing (dry) Note: Weights apply to bread in stuffing. | $\begin{array}{r} 1 \text { serving }=20 \mathrm{gm} \text { or } 0.7 \mathrm{oz} \\ 3 / 4 \text { serving }=15 \mathrm{gm} \text { or } 0.5 \mathrm{oz} \\ 1 / 2 \text { serving }=10 \mathrm{gm} \text { or } 0.4 \mathrm{oz} \\ 1 / 4 \text { serving }=5 \mathrm{gm} \text { or } 0.2 \mathrm{oz} \end{array}$ |
| GROUP B | MINIMUM SERVING SIZE FOR GROUP B |
| - Bagels <br> - Batter type coating <br> - Biscuits <br> - Breads (white, wheat, whole wheat, French, Italian) <br> - Buns (hamburger and hotdog) <br> - Crackers (graham crackers all shapes, animal crackers) <br> - Egg roll skins <br> - English muffins <br> - Pita bread (white, wheat, whole wheat) <br> - Pizza crust <br> - Pretzels (soft) <br> - Rolls (white, wheat, whole wheat, potato) <br> - Tortillas (wheat or corn) <br> - Tortilla chips (wheat or corn) <br> - Taco shells | $\begin{array}{r} 1 \text { serving }=25 \mathrm{gm} \text { or } 0.9 \mathrm{oz} \\ 3 / 4 \text { serving }=19 \mathrm{gm} \text { or } 0.7 \mathrm{oz} \\ 1 / 2 \text { serving }=13 \mathrm{gm} \text { or } 0.5 \mathrm{oz} \\ 1 / 4 \text { serving }=6 \mathrm{gm} \text { or } 0.2 \mathrm{oz} \end{array}$ |

 2

| GROUP C | MINIMUM SERVING SIZE FOR GROUP C |
| :---: | :---: |
| - Cookies ${ }^{2}$ (plain) <br> - Cornbread <br> - Corn muffins <br> - Croissants <br> - Pancakes <br> - Pie crust (dessert pies ${ }^{2}$, fruit turnovers ${ }^{3}$, and meat/meat alternate pies) <br> - Waffles | $\begin{aligned} 1 \text { serving } & =31 \mathrm{gm} \text { or } 1.1 \mathrm{oz} \\ 3 / 4 \text { serving } & =23 \mathrm{gm} \text { or } 0.8 \mathrm{oz} \\ 1 / 2 \text { serving } & =16 \mathrm{gm} \text { or } 0.6 \mathrm{oz} \\ 1 / 4 \text { serving } & =8 \mathrm{gm} \text { or } 0.3 \mathrm{oz} \end{aligned}$ |
| GROUP D | MINIMUM SERVING SIZE FOR GROUP D |
| - Doughnuts ${ }^{3}$ (cake and yeast raised, unfrosted) <br> - Granola bars ${ }^{3}$ (plain) <br> - Muffins (all, except corn) <br> - Sweet roll ${ }^{3}$ (unfrosted) <br> - Toaster pastry ${ }^{3}$ (unfrosted) | 1 serving $=50 \mathrm{gm}$ or 1.8 oz $3 / 4$ serving $=38 \mathrm{gm}$ or 1.3 oz $1 / 2$ serving $=25 \mathrm{gm}$ or 0.9 oz $1 / 4$ serving $=13 \mathrm{gm}$ or 0.5 oz |
| GROUP E | MINIMUM SERVING SIZE FOR GROUP E |
| - Cookies ${ }^{2}$ (with nuts, raisins, chocolate pieces and or/fruit purees) <br> - Doughnuts ${ }^{3}$ (cake and yeast raised, frosted or glazed) <br> - French toast <br> - Grain fruit bars ${ }^{3}$ <br> - Granola bars ${ }^{3}$ (with nuts, raisins, chocolate pieces and or/fruit) <br> - Sweet rolls ${ }^{3}$ (frosted) <br> - Toaster pastry ${ }^{3}$ (frosted) | 1 serving $=63 \mathrm{gm}$ or 2.2 oz $3 / 4$ serving $=47 \mathrm{gm}$ or 1.7 oz $1 / 2$ serving $=31 \mathrm{gm}$ or 1.1 oz $1 / 4$ serving $=16 \mathrm{gm}$ or 0.6 oz |

1. Some of the following foods, or their accompaniments may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.
2. Allowed only for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP.
3. Allowed for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP, and for breakfasts served under the SBP, SFSP and CACFP.
4. Refer to program regulations for the appropriate serving size for supplements served to children aged 1 through 5 in the NSLP; breakfasts served under the SBP; and meals served to children ages 1 through 5 and adult participants in the CACFP. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

| GROUP F | MINIMUM SERVING SIZE FOR GROUP F |
| :---: | :---: |
| - Cake ${ }^{2}$ (plain, unfrosted) <br> - Coffee cake ${ }^{3}$ | $\begin{aligned} & 1 \text { serving }=75 \mathrm{gm} \text { or } 2.7 \mathrm{oz} \\ & 3 / 4 \text { serving }=56 \mathrm{gm} \text { or } 2 \mathrm{oz} \\ & 1 / 2 \text { serving }=38 \mathrm{gm} \text { or } 1.3 \mathrm{oz} \\ & 1 / 4 \text { serving }=19 \mathrm{gm} \text { or } 0.7 \mathrm{oz} \end{aligned}$ |
| GROUP G | MINIMUM SERVING SIZE FOR GROUP G |
| - Brownies ${ }^{2}$ (plain) <br> - Cake ${ }^{2}$ (all varieties, frosted) | $\begin{aligned} & 1 \text { serving }=115 \mathrm{gm} \text { or } 4 \mathrm{oz} \\ & 3 / 4 \text { serving }=86 \mathrm{gm} \text { or } 3 \mathrm{oz} \\ & 1 / 2 \text { serving }=58 \mathrm{gm} \text { or } 2 \mathrm{oz} \\ & 1 / 4 \text { serving }=29 \mathrm{gm} \text { or } 1 \mathrm{oz} \end{aligned}$ |
| GROUP H | MINIMUM SERVING SIZE FOR GROUP H |
| - Barley <br> - Breakfast cereals (cooked) ${ }^{4}$ <br> - Bulgur or cracked wheat <br> - Macaroni (all shapes) <br> - Noodles (all varieties) <br> - Pasta (all shapes) <br> - Ravioli (noodle only) <br> - Rice (enriched white or brown) | $\begin{aligned} 1 \text { serving }= & (\text { (or } 25 \text { gm dry) } \end{aligned}$ |
| GROUP I | MINIMUM SERVING SIZE FOR GROUP I |
| - Ready-to-eat breakfast cereal (cold dry) ${ }^{4}$ | 1 serving $=3 / 4$ cup or 1 oz whichever is less |

1. Some of the following foods, or their accompaniments may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.
2. Allowed only for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP.
3. Allowed for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP, and for breakfasts served under the SBP, SFSP and CACFP.
4. Refer to program regulations for the appropriate serving size for supplements served to children aged 1 through 5 in the NSLP; breakfasts served under the SBP; and meals served to children ages 1 through 5 and adult participants in the CACFP. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

## APPENDIX 5:

## Questions and Answers on Offer versus Serve (OVS)

## 1. OVS: General Questions

## Q. Can the State agency prohibit the use of OVS at the senior high level?

A. No. The State agency cannot prohibit use of OVS in the NSLP at the senior high level. School food authorities must implement OVS at senior high levels.
Q. Below the senior high level for the NSLP and for the SBP, who determines if OVS is implemented?
A. The decision to use OVS for the SBP or for grades below the senior high school level in the NSLP is a school food authority decision. The school food authority may make this decision on a school-by-school basis or may only implement OVS on some days. (The school food authority should consider the practicality of such decisions.) Except at the senior high level, the State agency cannot require implementation of OVS for either the SBP or for the NSLP.
Q. Does OVS apply to the snack service of the NSLP?
A. No, there is no OVS in the snack service because only two components are required.
Q. Are schools with pre-plated systems required to convert to another system to accommodate OVS?
A. No, even senior high schools are not required to change their serving system to accommodate OVS. However, the SFA may wish to contact their State agency to discuss ways (such as individually packaging each food item) to i mplement OVS.
Q. Are food bars/salad bars/garden bars permitted with OVS?
A. Yes, food bars are permitted with OVS. To allow the students and cashiers to identify reimbursable meals from food bars, the menu planner must clearly identify the food items/menu items provided on the food bar and the minimum serving size for each item. Further, the menu planner must also indicate which foods and combinations of foods the students may choose to select a reimbursable meal under OVS.
Q. Can a school have both OVS and á la carte service?
A. Yes. Both foods offered in reimbursable meals and other foods (except foods of minimal nutritional value as defined in the NSLP and SBP regulations) may be offered á la carte. Students and cashiers need to know which foods are considered food items/menu items for the purposes of a reimbursable meal and OVS. Students and cashiers also need to be aware that if the required food items/menu items for a reimbursable meal under OVS are not selected, students will be charged á la carte prices for the items selected.
Q. A school food authority has developed an alternate approach to menu planning as allowed under 7 CFR 210.10(1) and 220.8(h). How should OVS be implemented?
A. In general, the alternate menu planning approach follows the OVS procedures for food-based or nutrient standard menu planning. Please see 7 CFR 210.10(1)(4)(ii) and 7 CFR 220.8(h)(3)(ii) on OVS for alternate menu planning approaches and how OVS is to be implemented for alternate menu planning approaches.

## 2. OVS and Food-Based Menu Planning: Traditional and Enhanced

Q. What is the difference between 'choices' and 'food items' in Food-Based Menu Planning?
A. While multiple choices may be offered for various food items, the number of choices does not affect the number of food items that the menu planner establishes for any given meal as comprising a reimbursable lunch or breakfast.

The menu planner may offer several choices within a food item. For example, the menu planner offers students choices of fruit for the fruit/vegetable component - apple, orange, peach slices - within the food item fruit. Here, one food item is offered - fruit - but the student has three choices.
Q. What is the minimum number of food items students must select in order for a school lunch to be considered reimbursable?
A. Senior high school students must choose at least three of the five required food items offered.

If the School Food Authority (SFA) decides to implement Offer versus Serve (OVS) in schools below the senior high school level, students must choose at least three (or four, depending on local policy) of the five required food items offered.

In non-OVS schools or grade levels, students must select all five food items in order for meal pattern requirements to be met.
Q. What is the minimum number of food items students must select in order for a school breakfast to be reimbursable?
A. If the SFA implements OVS, students must choose at least three of the four food items offered. In non-OVS schools, all four food items must be taken in order for meal pattern requirements to be met.
Q. Is there a minimum daily amount of a serving that can qualify as a Grains/Breads component under OVS?
A. One-fourth of a serving is the minimum amount that may be credited toward the full Grains/Breads component. The school, however, still must offer, at a minimum, a full serving daily in order to meet the overall Grains/Breads requirement.
Q. How does unit pricing apply to the food-based menu planning approaches?
A. Under the food-based menu planning approaches for the NSLP, a student who takes 3, 4, or 5 food items pays the same price.
Q. If the school food service serves a menu item that is a combination of foods (such as beef stew) that cannot be separated; can the student be required to take that item?
A. Yes. Combination foods that do not allow separation of food items may require that specific foods be selected in order to meet meal pattern requirements. Therefore, when students cannot select other items to make up a reimbursable meal, they must take a combination dish.
Q. Under the Traditional Food-Based menu planning approach, Group IV of the meal pattern requires that at least 2 servings of vegetables/fruits, totaling $3 / 4$ of a cup be offered. A menu planner chooses to offer 3 servings ( $1 / 4$ cup of peaches, $1 / 4$ cup of peas and $1 / 4$ cup of green beans) totaling $3 / 4$ of a cup. If the student selects the peaches and the peas along with a carton of milk, is this a reimbursable meal under OVS since the student has taken two different sources of vegetables/fruits?
A. No, it is not a reimbursable meal; the student must take the number of servings of vegetables/fruits which total the full amount required in the meal pattern for the component. In this example, to meet the requirement for the component and thus to count as 2 food items for OVS, the student must take all 3 servings.
Q. Consider this SBP menu for either of the food-based menu planning approaches for kindergarten through grade 12:

Choice of full-strength orange juice, full-strength apple juice OR fruit cup;
Choice of: low-fat chocolate milk, low-fat unflavored milk OR fat-free unflavored milk;
Choice of two of the same or two different foods from the following:
Scrambled egg (1/2 large egg)
1 slice of whole-wheat toast
1.8-ounce blueberry muffin
1.1-ounce waffle
$3 / 4$ cup of cold cereal


Please indicate if the following trays selected by students are reimbursable:

## Tray

2 servings of scrambled egg
(1 large egg) and apple juice

1 serving of scrambled egg (1/2 large egg) and juice

Reimbursable?
Yes, there are 3 food items because double servings of the meat/meat alternate component are counted under the SBP.

No, only 2 food items selected. To be reimbursable, the student must select another serving of scrambled egg, a grain/bread item or milk.
Q. A school offers 1 large egg, scrambled, with 1 ounce of cheese on a biscuit (which provides 2 servings of grains/breads). If the student selects only this item, does s/he have a reimbursable breakfast?
A. No. While the egg/cheese biscuit has 2 servings of meat/meat alternate and 2 servings of grains/breads, a maximum of 2 food items from these components may be counted towards a reimbursable breakfast. The student must also select a milk or vegetables/ fruits item to have a reimbursable breakfast.

## 3. OVS and Nutrient-Based Menu Planning: Nutrient Standard Menu Planning (NSMP) and Assisted NSMP

Q. What is the difference between 'choices' and 'menu items' for Nutrient-Based Menu
Planning?
A. The menu planner may offer several choices within a menu item. On a particular day, for example, he or she may offer students several choices of entrées - hamburger with bun, pizza, chef salad. Here, one menu item is offered - entrée - but the student has three choices.

## Q. Must the student select the entrée under OVS for lunch?

A. Yes; under nutrient standard menu planning/assisted nutrient standard menu planning, the student can never decline the entrée for a reimbursable lunch. If the student does not want to take the entrée, the meal cannot be claimed for reimbursement, and the student must be charged á la carte prices, regardless of the number of other menu items selected.
Q. Under NSMP and Assisted NSMP, is it acceptable for a student to take the entrée and one other item if the planned meal includes the entrée, milk, and three additional menu items?
A. No. In this example, the menu planner has determined that the reimbursable meal includes three menu items in addition to milk and an entrée. Therefore, the student may not decline more than two items. The student must take the entrée and at least two other menu items.
Q. How are serving sizes determined for OVS under Nutrient Standard Menu Planning/ Assisted Nutrient Standard Menu Planning?
A. Because there are no prescribed serving sizes for the nutrient standard menu planning approach, once the menu is planned based on the nutrient analysis, the planned serving sizes become the required serving sizes for a reimbursable meal and for OVS. If an amount smaller than the planned serving size is served, the menu item cannot count toward meeting the meal requirements under OVS. For the purposes of OVS, it is important that the menu planner communicate the planned serving sizes to all staff in order to ensure that the student receives a reimbursable meal.
Q. Which of these lunch meals would NOT be considered a reimbursable meal under OVS in NSMP and Assisted NSMP?*

* NOTE: Whether or not the $1 / 3$ RDA criteria is being met is irrelevant for this exercise.


## LUNCH A:

The school offers:
Steak Sandwich
Celery Sticks
French Fries
Milk

The student chooses:
Steak Sandwich
Milk

Reimbursable under OVS? $\square$ Yes $\square$ No

## LUNCH B:

The school offers:
Pizza
Fresh Peach
Milk

The student chooses:
Fresh Peach
Milk
Reimbursable under OVS? $\square$ Yes $\square$ No


## LUNCH C:

## The school offers:

Tacos with Lettuce
and Tomato
Fruit Cocktail
Potato Rounds
Milk

The student chooses:
Tacos with Lettuce and Tomato

Reimbursable under OVS? $\square$ Yes $\square$ No

## LUNCH D:

## The school offers:

The student chooses:
Chicken Nuggets
Dinner Roll
Tossed Salad
Tossed Salad
Dinner Roll
Milk
Reimbursable under OVS?Yes $\square$ N

## LUNCH E:

The school offers:
Chicken Enchilada
Low-fat Refried Beans
Milk
The student chooses:
Chicken Enchilada
Low-fat Refried Beans
Reimbursable under OVS? $\square$ Yes $\square$ No
A. The answer is: Lunches B, C, and D are NOT reimbursable under OVS with NSMP and Assisted NSMP. In B and D, the student did not choose the entrée; in C the student chose only one menu item.
Q. How can a menu planner help students make more nutritious choices among the side dishes offered?
A. Side dishes may be divided into 2 or more groups to help target students' selections. For example, one group of side dishes could include fruits and vegetables while a second group could include grains and desserts. Consider this NSLP menu in which side dishes are grouped:

## Entrées:

Choose 1 of the following:
Hamburger on a bun
Cheeseburger on a bun
Pepperoni pizza
Grilled chicken, mashed potatoes and gravy

## Side dishes:

Choose 2 of the following:
Garden salad with choice of dressing
Steamed broccoli
Mexican corn
Oven baked potatoes
Orange smiles
Fresh strawberries with whipped topping
Choose 1 of the following:
Garlic bread
Whole-wheat dinner roll
Whole-wheat sugar cookie
Milk:
Choose of the following:
Low-fat chocolate milk
Low-fat unflavored milk
Fat-free unflavored milk
Whole unflavored milk

How many items are offered in this menu? What must a student select in order to have a reimbursable meal under OVS?

There are 5 menu items planned for a reimbursable meal (an entrée, 3 side dishes and milk). At a minimum under OVS, the student must select an entrée and at least 2 other menu items from any of the groups.
Refer to USDA's Offer versus Serve publication for additional guidance on Offer versus Serve at teamnutrition.usda.gov/Resources/offer_v_serve.html.

## APPENDIX 6: <br> The USDA Child Nutrition Labeling Program

What is the Child Nutrition Labeling Program?

The Child Nutrition (CN) Labeling Program is a voluntary Federal labeling program for the Child Nutrition Programs.

## Who runs the program?

The CN Labeling Program is run by the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA) in cooperation with the following agencies:

- Food Safety and Inspection Service
- Agricultural Marketing Service
- National Marine Fisheries Service

The program is operated by FNS directly with commercial food processing firms.

## How does the program work?

The program requires an evaluation of a product's formulation by FNS to determine its contribution toward meal pattern requirements. It allows manufacturers to state this contribution on their labels. The program provides a warranty against FNS audit claims for purchasers of CN -labeled products.

## What products are eligible for CN labels?

- Main dish products which contribute to the Meat/Meat Alternate component of the meal pattern requirements. Examples of these products include beef patties, cheese or meat pizzas, meat or cheese and bean burritos, egg rolls, breaded fish portions, and soy patties.
- Juice and juice drink products which contain less than 100 percent full-strength juice or at least 50 percent full-strength juice by volume. This includes such products as grape drink, fruit punch, and frozen juice drink bars.


## To carry CN labels, eligible products must:

- Be produced under Federal Inspection by USDA or USDC.
- Have the contribution of Meat/Meat Alternate products determined using yields in the USDA Food Buying Guide for Child Nutrition Programs.


## Are manufacturers required to CN label products?

There is no Federal requirement that anyone make or purchase CN -labeled products. Purchasing decisions are left to the local level. If a CN-labeled product is desired, this must be clearly stated in purchasing specifications.

## What are the advantages of using CN labels?

- A CN label statement clearly identifies the contribution of a product toward the meal pattern requirements. It protects you from exaggerated claims about a product.
- A CN label provides a warranty against FNS audit claims, if used according to the manufacturer's directions.


## Do CN-labeled products cost more?

They should not. Cost comparison between two meat products should be based on the cost per ounce or pound that contributes to the meal pattern requirements, not on the product cost per ounce or pound.

## How do I identify a CN label?

A CN label will always contain the following:

- The CN logo, which is a distinct border.
- The meal pattern contribution statement.
- A 6-digit product identification number.
- USDA/FNS authorization statement.
- The month and year of approval.


## Sample Label Statement



* The six-digit CN identification number is assigned by the FNS, CND, Headquarters office.
** The date is written using numbers to reflect the month/year or final FNS approval.


## For more information:

For additional information about the CN Labeling Program, contact:
U.S. Department of Agriculture

Child Nutrition Division
Food and Nutrition Service
3101 Park Center Drive - Room 632
Alexandria, VA 22302
Telephone: (703) 305-2609



## APPENDIX 7: <br> Foods of Minimal Nutritional Value

Foods of Minimal Nutritional Value (FMNV) are a part of the Competitive Foods regulation. Competitive Foods are foods that may be served or sold in competition to the reimbursable school meal. FMNV are foods that are prohibited from being served or sold in competition to the reimbursable school meal. Specific Categories of FMNV are defined in the Competitive Foods regulation excerpt below. The Department alone has the authority to exempt products classified as FMNV. The Department receives and reviews petitions related to FMNV and makes the determination for exemption. Once a product is exempted, the Department notifies the company and the State Agencies of its decision. In addition, the Department maintains a list of products that have been exempted from the categories of FMNV. Once a product is exempted, the product may be sold in competition to the reimbursable meal. State Agencies and School Food Authorities reserve the right to prohibit any product from being served or sold in their programs regardless of exemption status.

The following excerpts are from Federal program regulations to explain exemption requirements and to provide current contact information. The complete regulations are published in the Code of Federal Regulations (CFR). Section 210.11 refers to school lunch; Section 220.12 refers to school breakfast. An Appendix B follows each.

## COMPETITIVE FOOD SERVICES

## 7 CFR Sec. 210.11 (National School Lunch Program) and 7 CFR 220.12 (School Breakfast Program)

(a) Definitions. For the purpose of this section:
(1) Competitive foods means any foods sold in competition with the Program to children in food service areas during the lunch periods.
(2) Food of minimal nutritional value means: (i) In the case of artificially sweetened foods, a food which provides less than five percent of the Reference Daily Intakes (RDI) for each of eight specified nutrients per serving; and (ii) in the case of all other foods, a food which provides less than five percent of the RDI for each of eight specified nutrients per 100 calories and less than five percent of the RDI for each of eight specified nutrients per serving. The eight nutrients to be assessed for this purpose are - protein, vitamin A, vitamin C, niacin, riboflavin, thiamine, calcium, and iron. All categories of food of minimal nutritional value and petitioning requirements for changing the categories are listed in appendix B of this part.
(b) General. State agencies and school authorities shall establish such rules or regulations as are necessary to control the sale of foods in competition with lunches served under the Program. Such rules or regulations shall prohibit the sale of foods of minimal nutritional value, as listed in appendix B of this part, in the food service areas during the lunch periods.

The sale of other competitive foods may, at the discretion of the State agency and school food authority, be allowed in the food service area during the lunch period only if all income from the sale of such foods accrues to the benefit of the nonprofit school food service or the school or student organizations approved by the school. State agencies and school food authorities may impose additional restrictions on the sale of and income from all foods sold at any time throughout schools participating in the Program.

## CATEGORIES OF FOODS OF MINIMAL NUTRITIONAL VALUE

## APPENDIX B TO PART 210 (National School Lunch Program) and PART 220 (School Breakfast Program)

(a) Foods of minimal nutritional value - Foods of minimal nutritional value are:
(1) Soda Water - A class of beverages made by absorbing carbon dioxide in potable water.

The amount of carbon dioxide used is not less than that which will be absorbed by the beverage at a pressure of one atmosphere and at a temperature of 60 degrees $F$. It either contains no alcohol or only such alcohol, not in excess of 0.5 percent by weight of the finished beverage, as is contributed by the flavoring ingredient used. No product shall be excluded from this definition because it contains artificial sweeteners or discrete nutrients added to the food such as vitamins, minerals and protein.
(2) Water Ices — As defined by 21 CFR 135.160 Food and Drug Administration Regulations except that water ices which contain fruit or fruit juices are not included in this definition.
(3) Chewing Gum - Flavored products from natural or synthetic gums and other ingredients which form an insoluble mass for chewing.
(4) Certain Candies - Processed foods made predominantly from sweeteners or artificial sweeteners with a variety of minor ingredients which characterize the following types:
(i) Hard Candy - A product made predominantly from sugar (sucrose) and corn syrup which may be flavored and colored, is characterized by a hard, brittle texture, and includes such items as sour balls, fruit balls, candy sticks, lollipops, starlight mints, after dinner mints, sugar wafers, rock candy, cinnamon candies, breath mints, jaw breakers and cough drops.
(ii) Jellies and Gums - A mixture of carbohydrates which are combined to form a stable gelatinous system of jelly-like character, and are generally flavored and colored, and include gum drops, jelly beans, jellied and fruit-flavored slices.
(iii) Marshmallow Candies - An aerated confection composed as sugar, corn syrup, invert sugar, 20 percent water and gelatin or egg white to which flavors and colors may be added.
(iv) Fondant - A product consisting of microscopic-sized sugar crystals which are separated by thin film of sugar and/or invert sugar in solution such as candy corn, soft mints.
(v) Licorice - A product made predominantly from sugar and corn syrup which is flavored with an extract made from the licorice root.
(vi) Spun Candy - A product that is made from sugar that has been boiled at high temperature and spun at a high speed in a special machine.
(vii) Candy Coated Popcorn - Popcorn which is coated with a mixture made predominantly from sugar and corn syrup.
(b) Petitioning Procedures - Reconsideration of the list of foods of minimal nutritional value identified in paragraph (a) of this section may be pursued as follows:
(1) Any person may submit a petition to FNS requesting that an individual food be exempted from a category of foods of minimal nutritional value listed in paragraph (a). In the case of artificially sweetened foods, the petition must include a statement of the percent of Reference Daily Intake (RDI) for the eight nutrients listed in sec. 210.11(a)(2) "Foods of minimal nutritional value," that the food provides per serving and the petitioner's source of this information. In the case of all other foods, the petition must include a statement of the percent of RDI for the eight nutrients listed in sec. 210.11(a)(2) "Foods of minimal nutritional value," that the food provides per serving and per 100 calories and the petitioner's source of this information. The Department will determine whether or not the individual food is a food of minimal nutritional value as defined in sec. 210.11(a)(2) and will inform the petitioner in writing of such determination. In determining whether an individual food is a food of minimal nutritional value, discrete nutrients added to the food will not be taken into account.
(2) Any person may submit a petition to FNS requesting that foods in a particular category of foods be classified as foods of minimal nutritional value as defined in $\mathrm{sec} .210 .11(\mathrm{a})(2)$. The petition must identify and define the food category in easily understood language, list examples of the food contained in the category and include a list of ingredients which the foods in that category usually contain. If, upon review of the petition, the Department determines that there is a substantial likelihood that the foods in that category should be classified as foods of minimal nutritional value as defined in sec. 210.11(a)(2), the Department shall at that time inform the petitioner. In addition, the Department shall publish a proposed rule restricting the sale of foods in that category, setting forth the reasons for this action, and soliciting public comments. On the basis of comments received within 60 days of publication of the proposed rule and other available information, the Department will determine whether the nutrient composition of the foods indicat es that the category should be classified as a category of foods of minimal nutritional value. The petitioner shall be notified in writing and the public shall be notified of the Department's final determination upon publication in the FEDERAL REGISTER as indicated under paragraph (b)(3) of this section.
(3) Petitions may be submitted at any time.
(4) Written petitions should be sent to the Chief, Technical Assistance Section, Child Nutrition Division, FNS, USDA, 3101 Park Center Drive, Room 632, Alexandria, Virginia 22302. Petitions must include all information specified in paragraph (b) of this appendix and sec. 220.12(b)(1) or (2) as appropriate.

## APPENDIX 8: <br> Milk Requirement for School Lunch

Section 102 of the Child Nutrition and WIC Reauthorization Act of 2004 (Public Law 108-265) amended section 9(a)(2) of the Richard B. Russell National School Lunch Act (Russell) by removing (effective July 1, 2005) the requirement that schools participating in the National School Lunch Program (NSLP) offer students a variety of fluid milk consistent with prior year preferences. As amended, schools must offer fluid milk in a variety of fat contents and may offer flavored or unflavored milk and lactose-free fluid milk. This provision only applies to the NSLP as the School Breakfast Program and the Special Milk Program already have the flexibility to offer any type(s) of milk. The effective date allows school food authorities time to develop new procurement specifications for School Year 2005-06. For the full regulation on the milk requirement, refer to: www.fns.usda.gov/cnd/Governance/regulations/Reauthorization_04/2004-12-8.pdf

## APPENDIX 9:

A Look at Major Nutrients

Here are some facts about major nutrients, including what they contribute to good health and in what foods they are found. The nutrients are organized in seven groups:

\author{

1. Carbohydrates <br> 5. Macrominerals <br> 2. Proteins <br> 6. Microminerals <br> 3. Fats <br> 7. Water <br> 4. Vitamins
}

While you are not required to use this information to plan healthy school meals, it may be useful as a resource to share with teachers. Similarly, although some of the food sources listed may be less suitable for school meals than others, they might be appropriate for nutrition education activities.

## 1. Carbohydrates

- Supply energy (4 calories per gram).
- Spare proteins to be used for growth and maintenance of body tissues rather than energy.
- Provide fiber.


## Food sources include:

Complex carbohydrate foods include breads, cereals, pasta, rice, and starchy vegetables such as potatoes, corn, and lima beans.
Simple carbohydrate foods include sugar, honey, syrup, candy, soft drinks, icings, and fruit.

## 2. Proteins

- Build and repair body tissues.
- Help antibodies fight infection.
- Supply energy (4 calories per gram) if more is consumed than needed to build and repair body tissues.

Food sources include:
Meat, poultry, and fish
Eggs
Milk, yogurt, and cheese
Dried beans and peas
Nuts and nut butters


## 3. Fats

- Supply the most concentrated source of energy (9 calories per gram).
- Carry fat-soluble vitamins A, D, E, and K.
- Provide feeling of fullness and satisfaction since fats take longer to digest.


## Food sources include:

Oils, such as, soybean, canola, olive or corn
Shortening with no or minimal trans fat
Butter and margarine (stick or soft)
Mayonnaise and salad dressings
Table cream and sour cream

## 4. Vitamins

## Vitamin C (Ascorbic Acid)

- Helps form cementing substances such as collagen that hold body cells together, thus strengthening blood vessels and hastening healing of wounds and bones.
- Increases resistance to infections.
- Helps body absorb iron in the diet.


## Food sources include:

Cantaloupe, grapefruit, grapefruit juice, honeydew melon, kiwi fruit, mandarin orange sections, mango, orange juice, papaya, strawberries, tangerines, asparagus, broccoli, Brussels sprouts, cabbage, cauliflower, kale, sweet green and red peppers, sweet potatoes

## Thiamin (B1)

- Helps body cells obtain energy from food.
- Helps keep nerves healthy.
- Promotes good appetite and digestion.


## Food sources include:

Meat, poultry, and fish
Dried beans and peas
Nuts
Enriched and whole-grain breads and cereals

## Riboflavin (B2)

- Helps cells use oxygen to release energy from food.
- Helps keep eyes healthy and vision clear.
- Helps keep skin around mouth and nose healthy.



## Food sources include:

Milk
Liver
Meat, poultry, and fish
Eggs
Green leafy vegetables

## Niacin (B3)

- Helps cells use oxygen to release energy from food.
- Maintains health of skin, tongue, digestive tract, and nervous system.


## Food sources include:

Liver, meat, poultry, and fish
Peanuts and peanut butter
Dried beans and dried peas
Enriched and whole-grain breads and cereals

## Vitamin A

- Helps keep eyes healthy and able to adjust to dim light.
- Helps keep skin healthy.
- Helps keep lining of mouth, nose, throat and digestive tract healthy and resistant to infection.
- Promotes growth.

Food sources include:
Liver
Dark green and deep yellow vegetables (such as broccoli, collards and other green leafy
vegetables, carrots, pumpkin, sweet potatoes, winter squash)
Butter and fortified margarine
Whole milk, vitamin A-fortified fat-free milk, vitamin A-fortified low-fat milk

## Vitamin D

- Helps body absorb calcium.
- Helps body build strong bones and teeth.


## Food sources include:

Vitamin-D fortified milk
In addition:
Exposure to sunlight is another source of Vitamin D. (Vitamin D is produced in the skin with stimulus of sun.)

## Folate (Folic Acid or Folacin)

- Helps body produce normal red blood cells.
- Helps in the biochemical reactions of cells in the production of energy.


## Food sources include:

Wheat germ, wheat bran
Leafy green vegetables
Liver
Legumes

## Biotin

- Essential in the breakdown of carbohydrates, lipids, and proteins in the body.


## Food sources include:

Liver, kidneys
Egg yolk
Vegetables and fruits (especially bananas, grapefruits, watermelon, and strawberries)

## Pantothenic Acid

- Aids in the metabolism of fat.
- Aids in the formation of cholesterol and hormones.


## Food sources include:

Liverwurst, meats, poultry, egg yolk
Wheat germ and rice germ
Tomato paste
Sweet potatoes
Oatmeal
Milk

## Pyridoxine (B6)

- Needed to help nervous tissues function normally.
- Helps to maintain the health of the skin and red blood cells.
- Assists in the metabolism of proteins, carbohydrates, and fats.


## Food sources include:

Liver, lean meats
Cereals (fortified)
Vegetables
Milk

## Cyanocobalamin (B12)

- Necessary in the development of normal growth.
- Helps in the metabolism of folate.
- Helps protect against pernicious anemia.
(Pernicious anemia primarily results from the body's inability to absorb vitamin B12.
However, it can result from a deficiency of vitamin B12 in the diet.)


## Food sources include:

Liver
Clams, oysters
Meats, eggs, chicken
Milk and milk products

## 5. Macrominerals

## Calcium

- Needed for bone rigidity.
- Helps in blood clotting.
- Aids in muscle contraction, normal nerve functions.


## Food sources include:

Milk and milk products, such as, yogurt and cheese - fat-free, low-fat, and whole Green leafy vegetables such as kale, collards, mustard greens, and turnip greens
Sardines and salmon (canned with bones)
White beans, canned
Cereals and breads fortified with calcium
Orange juice enriched with calcium

## Phosphorous

- Helps build strong bones and teeth.
- Aids in all phases of calcium metabolism.


## Food sources include:

Meat, poultry, liver, fish
Eggs, milk and other milk products
Raw oranges, cherries, peaches
Rice, potatoes
Wheat flour

## Magnesium

- Helps regulate body temperature, muscle contractions, and the nervous system.
- Helps cells utilize carbohydrates, fats, and proteins.


## Food sources include:

## Green leafy vegetables

Nuts - including Brazil nuts, almonds, and cashews
Salmon
Cheddar cheese, milk, eggs
Dry beans and peas

## Sodium, Chloride, Potassium

These three work together to:

- Regulate the flow of fluids in the body.
- Help regulate the nervous system.
- Help regulate the muscle functions, including heart.
- Help regulate nutrient absorption in the cells.


## Food sources include:

Sodium and chloride are found in table salt.
Potassium is found in meats, milk, bananas, leafy green vegetables, and citrus fruits.

## 6. Microminerals

## Iron

- Combines with protein in the blood to form hemoglobin.


## Food sources include:

Liver and other organ meats, egg yolks
Dried legumes, leafy green vegetables
Shellfish
Iron-fortified breads and cereals
Whole grains

Zinc

- Helps lungs release oxygen.
- Assists in metabolism of carbohydrates


## Food sources include:

Oysters
Herring
Egg yolks
Organ meats

## Copper

- Necessary in the formation of hemoglobin.


## Food sources include:

Liver
Bran flakes
Cocoa powder

## Manganese

- Necessary for normal development of bones and connective tissues.


## Food sources include:

Nuts
Rice, whole grains
Beans
Leafy green vegetables

## Selenium

- Works in conjunction with vitamin E to protect cells from destruction.

Food sources include:
Fish, organ meats, shellfish
Eggs
Grains and plants grown in selenium-rich soil

## Chromium

- Maintains normal glucose uptake into cells.
- Helps insulin bind to cells.

Food sources include:
Vegetable oils
Egg yolks
Whole grains
Meats

## Iodine

- Needed by thyroid gland to produce thyroxine, which is essential for the oxidation rates of cells.

Food sources include:
Iodized salt
Ocean fish
Seaweed
Milk and milk products

## Fluoride

- Helps prevent tooth decay.


## Sources include:

Fluoridated drinking water
Seafood
Tea
Fruits and vegetables grown in areas where natural fluoride level in the water is high Fluoridated toothpaste

## 7. Water

- Is essential for life.
- Represents two-thirds of our body weight.
- Is part of every living cell.
- Is the medium for all metabolic changes (digestion, absorption, and excretion).
- Transports nutrients and all body substances.
- Helps maintain body temperature.
- Acts as a lubricant.


## Sources include:

Drinking water
Liquid foods
Water in foods
Water released when carbohydrates, protein, and fats are metabolized in the body

## APPENDIX 10:

## How to Evaluate a Supplier of Value-Added Produce

Value-added (fresh cut) produce is a ready-to-use fruit or vegetable. Using value-added produce can save you time and make it easier to serve fresh fruits and vegetables. Like many other foods, however, pre-cut produce can be a vehicle for food-borne illness if improperly stored or handled. To help you evaluate a supplier of pre-cut produce, here are some tips on sanitation, temperature, and dating:

■ Sanitation: Pre-cut produce can become contaminated in a variety of ways, including from soil, dirty water, or contaminated processing equipment. The supplier's ability to keep the processing facility and food handling equipment clean and sanitized is critical in preparing safe, fresh-cut produce. The supplier should have an ongoing food safety and sanitation inspection program.

- Temperature Control: For safety and quality, fresh-cut produce must be stored at certain temperatures. It must be kept as cold as possible (without freezing) from farm to refrigerated case. If produce is contaminated with food-borne pathogens, proper temperature control will slow their growth.
Also, fresh-cut produce that has been exposed to temperatures of $40^{\circ} \mathrm{F}$ or above for short periods of time will spoil more quickly. Spoiled produce should always be removed to prevent the spread of the spoilage.
- Dating: The supplier should have a good dating code system in place. A product can be labeled by one of two date code systems: one will show a "packed on" date, the other a "use by" date. For food safety reasons, always discard or reject fresh-cut product if the product is outdated.

Speedy distribution is vital. Check to see how long the produce you are purchasing will be in transit. To understand how the transit time affects the shelf life and date code, look at this example: If a product has 14 days of shelf life and 10 days of transit time, the product will be delivered to your school with only 4 days of shelf life.
Be sure to check date codes upon delivery and rotate properly on a "first in, first out" basis.

