

A Menu Planner for Healthy School Meals

Shenandoah's Pride

...to help you plan, prepare, serve, and market appealing meals. U.S. DEPARTMENT OF AGRICULTURE • FOOD AND NUTRITION SERVICE • FNS-303 • 1998, REV. 2008

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You Are A Vital Link to Children...

You can help children be healthier, now and in years to come.

As a school food service professional, you are part of a proud tradition.

Since 1946, the National School Lunch Program has provided financial support and federally purchased commodities to help schools and residential child care institutions serve nourishing, well-balanced meals to children. Many schools have also joined the School Breakfast Program to offer morning meals that help children be ready to learn.

While these programs have always been a partnership between the federal government, states, and local communities, you and your colleagues in schools have been — and still are — *the vital link* to children.

Today, your role is even more important than ever.

Research has shown that there is a *crucial* relationship between nutrition and health, and nutrition and learning. Physicians and scientists across the country agree that what we eat — as children and as adults — can affect us in very significant ways. And, there's compelling evidence that diet-related diseases don't necessarily wait until our later years to get their start.



For example, a major factor in heart disease, a leading cause of death in this country, is fatty deposits in arteries, a condition known as arteriosclerosis. Medical studies of teenagers have indicated that these fatty deposits can begin to accumulate even in children. Since the early days of school lunch, there have been significant changes in the way Americans eat. While the American diet may have provided adequate calories in the early 1940's, it was low in some nutrients. Today, nutrient deficiencies are rare, and many of our common problems are now related to a lack of variety and balance, and to over consumption and inadequate physical activity.

Americans typically consume more calories than they expend, which can lead to overweight and obesity. Many of us also eat more fat, saturated fat, *trans* fat, cholesterol, and sodium than is recommended—and too few whole grains, vegetables, fruits and calcium-rich foods.

You can make a difference.

Along with other members of the education community, you can help reverse these trends by offering healthy food choices to children. In fact, you're in a special position to show children what it means to eat for good health, including how important it is to eat foods from every food group.

You and your colleagues across the country have played a huge part in our nation's battle against hunger and malnutrition. You've made a difference in the lives of millions of children. The food you provide helps them be ready to learn. The choices you offer can help them build healthy lifestyles.

Use this menu planner from USDA to help you work toward your goal.



A Menu Planner for Healthy School Meals







Here's what this menu planner includes:

For starters, you will find information on the nutrition goals established by the *School Meals Initiative for Healthy Children*.

As a result of this initiative, there are now age-appropriate nutrition *and* calorie goals for lunches and breakfasts.

These nutrition goals for school meals are based on the 1989 Recommended Dietary Allowances (RDA), children's calorie needs, and the 1995 Dietary Guidelines for Americans. This planner gives you background on each of these and explains why they are important.

It also explains how the nutrition goals will affect the way you plan your meals to be reimbursable under program rules — and the way your State agency will review your meals for compliance with program rules.

Vou will also find information on the menu planning approaches that can help you achieve the nutrition goals.

In addition to the Traditional Food-Based Menu Planning approach, USDA has established an Enhanced Food-Based approach as well as two Nutrient-Based approaches, called Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP). This menu planner explains the differences between these approaches, and gives you an idea of how you can use each to plan a typical meal.

Using text and charts, Chapters 2 and 3 explain important features of interest to you, such as: nutrient standards; age/grade groups used; criteria for a reimbursable meal; meal structure for lunch and for breakfast; how Offer versus Serve works for lunch and for breakfast; use of standardized recipes; processed foods; production records; and child nutrition labeling.

You, or your school district, get to choose the menu planning approach that's right for you, so you will want to know the basics of each approach.

In addition, this Menu Planner offers practical suggestions for making simple changes to create healthy school meals.

These include a variety of ways to modify breakfast and lunch menus to meet the *Dietary Guidelines*, such as serving more whole grains, vegetables, and fruits, and offering a greater variety of low-fat foods, including fat-free and low-fat milk.

You will also find ideas for *serving* foods — such as salsas for fresh flavor and less fat — and making substitutions, like using low-fat mayonnaise and salad dressings.

There are also tips on *preparing* foods in different ways, such as baking French fries rather than deep-frying them, or serving baked potatoes instead.

Despite your best efforts, kids can be hard to convince. That's why the final chapter addresses marketing healthy school meals.

You will find strategies that have worked for some of your colleagues, such as having classroom tasting parties and planning special promotions.





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CHAPTER 1



You Can Meet the Nutrition Goals in a Variety of Ways

Chapter 1

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You Can Meet the Nutrition Goals In a Variety of Ways

ince their inception, the school meals programs have focused on safeguarding
children's health and well-being. USDA's School Meals Initiative for Healthy Children reinforces this objective by:

- establishing specific nutrition goals for school breakfasts and school lunches
- making available menu planning alternatives to help you meet these nutrition goals.

In this chapter, we'll take a general look at the menu planning approaches USDA has established, including the Traditional Food-Based approach. We'll see what the other approaches have in common with the Traditional approach. In later chapters, we'll focus on how each approach works and the steps you will use to plan a typical menu.

Throughout, we'll keep in mind the nutrition goals established by USDA's 1995 *School Meals Initiative for Healthy Children* which continue to be followed. These nutrition goals are based on:

- the 1989 Recommended Dietary Allowances
- children's calorie (energy) requirements
- the recommendations of the 1995 Dietary Guidelines for Americans

The Dietary Guidelines for Americans are updated every five years to provide the most current nutrition recommendations. Although the current School Meals Initiative nutrient standards are based on the 1995 Dietary Guidelines, when the Dietary Guidelines are updated, the nutrient standards are reviewed and may be revised. The 2005 Dietary Guidelines for Americans made significant changes in dietary recommendations which will have an impact on the Child Nutrition Program requirements. The Food and Nutrition Service will propose various changes to the program regulations to reflect the applicable recommendations of the 2005 Dietary Guidelines. The proposed regulation will be published in the Federal Register and school foodservice professionals will be encouraged to comment.

The 2005 Dietary Guidelines for Americans are described in this document so that school foodservice professionals will be aware of the recommendations and move toward implementing these guidelines in their programs.

Choosing the Menu Planning Approach That's Right for You

It's a good idea to consider the merits of each menu planning approach before choosing which to implement. Here's an overview:

Schools have traditionally used a Food-Based Menu Planning approach that requires specific food components be served in certain amounts.

With this Traditional approach, there are four components — Meat /Meat Alternate, Grains/ Breads, Vegetables/Fruits, and Milk — and three established age/grade groups for lunch (specifically, preschool, Grades K through 3, and Grades 4 through 12). There's also an optional age/grade group (for Grades 7 through 12).

However, you may find that the Enhanced Food-Based Menu Planning or one of the Nutrient-Based Menu Planning approaches help you to target meals more closely to the needs of the children you serve.

These menu planning approaches have been specifically designed to provide optional ways for you to create menus consistent with the nutrition goals and nutrient standards. These approaches will help you:

- provide adequate calories, nutrients, and dietary fiber for a specific age group, and
- reduce or limit fat, saturated fat, and cholesterol.

Remember that the nutrition goals — and the nutrient standards designed to achieve these goals — apply to all menu planning approaches. As a result, the nutrition goals and nutrient standards will affect the way the State agency monitors your meals for compliance with program requirements. This will be explained in more detail in later chapters.

We'll examine each of the menu planning approaches in detail in subsequent chapters, but first, let's look at:

- An overview of the menu planning approaches.
- A comparison of menu planning approaches.
- The nutrition goals and what they mean for you as a school foodservice professional.

Traditional Food-Based Menu Planning

The Traditional Food-Based Menu Planning approach requires specific food group components in specific amounts for specific age/grade groups. It is the approach that schools have used since the National School Lunch Program was established in 1946 and the School Breakfast Program in 1966.

Because this approach was designed before the Dietary Guidelines became part of school meal requirements, the meal plans do not have any *built-in* features that will help you serve meals that comply with these guidelines. You will need to give extra thought to planning meals that meet the nutrition goals — including target calorie levels — while limiting fat, saturated fat, *trans* fat, cholesterol, and sodium.

Enhanced Food-Based Menu Planning

Enhanced Food-Based Menu Planning is similar to the Traditional approach — it requires specific food group components in specific amounts. However, there are *different* established age/grade groups. And, there are increased servings of Vegetables/Fruits and Grains/Breads. This approach uses **meal patterns** designed to help ensure consistency with the Dietary Guidelines for Americans.

Nutrient Standard Menu Planning (NSMP)

NSMP takes a Nutrient-Based approach to menu planning. Instead of working with specific food components in specific amounts, the menu planner works with menu items. This approach requires a nutritional analysis of foods used in school meals prior to the menus being served. To do this, schools must use USDA-approved computer software. When averaged over a school week, the menu nutrient analysis must meet specified targets for nutrients, calories, and Dietary Guidelines recommendations.

What about age/grade groups for NSMP? Here you have some extra choices. You can use the same age/grade groups as used for Enhanced Food-Based Menu Planning. Or, you can use the computer software to customize optional age groups.

Assisted NSMP

Assisted NSMP is exactly like NSMP *except* an outside consultant or other agency performs all of the functions of menu planning and nutrient analysis. If you do not have computer technology that will allow you to use NSMP, you may wish to choose Assisted NSMP.

Alternate Menu Planning Approaches

These menu planning approaches allow State agencies and School Food Authorities to develop their own innovative approaches to menu planning—subject to the guidelines established in the National School Lunch Program (NSLP) regulations. Contact your State agency for more information.

You Are Working Toward Specific Nutrition Goals

The School Meals Initiative for Healthy Children established specific nutrition goals for school breakfasts as well as school lunches. These nutrition goals are aimed at...

- providing adequate calories and nutrients for specific age groups, and
- reducing fat and saturated fat to recommended levels.
- No matter which menu planning approach you choose, you must meet specific nutrition goals. The nutrition goals will be updated periodically to reflect changes in the Dietary Guidelines for Americans or the Recommended Dietary Allowances. The current nutrition goals are based on:
 - 1989 Recommended Dietary Allowances (RDA)
 - 1/3 RDA for lunch
 - 1/4 RDA for breakfast
 - Age appropriate
 - Calorie Goals
 - Age appropriate
 - 1995 Dietary Guidelines for Americans

What does this mean for you? Food-based lunch and breakfast meal patterns have been designed to provide a certain percentage of RDA for key nutrients. There are also nutrient standards for school lunch and school breakfast menus that establish the required level of calories and key nutrients to meet the nutrition goals for specific age or grade groups of children.

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Regardless of the menu planning approach you follow, your breakfast and lunch menus, when averaged over a school week, should meet the nutrient standards for the selected age or grade group.

Local wellness policies designed by the schools may also set standards for food served in the school and physical activity programs. For more information about this initiative, go to the Team Nutrition Web page at *teamnutrition.usda.gov/Healthy/wellnesspolicy.html* or your local wellness committee.

The age and grade groups are the same for Enhanced Food-Based Menu Planning, NSMP, and Assisted NSMP which results in similar nutrient standards for these age/grade groups. With NSMP and Assisted NSMP, you have the extra flexibility of customizing age groups. Customizing age groups will allow you to know and provide the nutrients and calories that most closely meet the physiological needs of the children you serve.

A Closer Look at the Nutrient Standards

The nutrient standards for healthy school meals specify target goals for key nutrients for different groups of children. Foods that naturally contain these nutrients also typically contain other essential nutrients not specified in the nutrient standards.

- The nutrient standards set target goals for the following:
 - Protein Vitamin A
 - Vitamin C Calories
 - Calcium Iron

- Also, in keeping with the recommendations of the 1995 Dietary Guidelines, the nutrient standards set target goals for fat. These are:
 - No more than 30 percent of calories from fat.
 - Less than 10 percent of calories from saturated fat. Keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.
- The nutrient standards do not set *specific* target goals for cholesterol, sodium, and dietary fiber. In keeping with the *School Meals Initiative for Healthy Children*, your goal is to work to *reduce* cholesterol and sodium and *increase* dietary fiber.

The nutrient standards and nutrition goals will be updated periodically to reflect changes in the Dietary Guidelines for Americans or the Recommended Dietary Allowances. Although the current nutrition goals are based on the 1995 Dietary Guidelines, information on the 2005 Dietary Guidelines is provided so that schools can begin to work towards these goals.

WHY THE NUTRITION GOALS ARE IMPORTANT...



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We all know generally what nutrition is. It's the process by which our bodies take in and use food. But why is it so important? What does good nutrition provide?

Good nutrition provides the calories we need for energy and the nutrients essential for...

- proper growth, repair, and maintenance of body tissues
- resistance to disease and infection
- prevention of deficiencies that lead to problems such as anemia, goiter, scurvy, and rickets.

In recent decades, medical researchers have found that good nutrition can also help reduce the risks of coronary heart disease and certain types of cancer.

In short, while we can sometimes get by with less than an optimum diet, to thrive we need a healthy diet. A healthy diet provides...

- essential nutrients and energy to prevent nutritional deficiencies and excesses
- the right balance of carbohydrate, fat, and protein to reduce risks for chronic disease
- a variety of foods including whole grains, vegetables, fruits, and low-fat and fat-free milk and milk products, and lean meats, poultry, fish, beans, eggs, and nuts.

Start With the Dietary Guidelines for Americans... End Up With Healthier Meals!

The best way to provide healthier food choices in school meals is to apply the core messages of the Dietary Guidelines for Americans to your menus and food items. In fact, the Dietary Guidelines are an important starting point for the nutrition goals set by the *School Meals Initiative for Healthy Children*.

What exactly are the Dietary Guidelines for Americans?

The Dietary Guidelines are a set of recommendations designed for healthy Americans age 2 years and older. The intent of the Dietary Guidelines is to summarize information regarding individual nutrients and food components into recommendations for a pattern of eating that can be adopted by the public. They reflect science-based evidence to promote health and help reduce the risk for major chronic diseases through diet and physical activity.



The Dietary Guidelines are published jointly by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services. Every 5 years, as required by law, the guidelines are reviewed by a panel of experts to determine whether the existing standards should be altered and, if so, to recommend changes.

What is a "Healthy Eating Plan"?

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The 2005 Dietary Guidelines describe a healthy eating plan as one that:

- Emphasizes fruits, vegetables, whole-grain foods, and fat-free or low-fat milk and milk products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, *trans* fats, cholesterol, salt (sodium), and added sugars.

What do the Dietary Guidelines recommend?

The food and physical activity choices made every day affect your health and the health of your students—how they feel today, tomorrow, and in the future. Students may be eating plenty of food, but not eating the right foods that give their body the nutrients they need to be healthy. They may not be getting enough physical activity to stay fit. Eating right and being physically active aren't just a "diet" or a "program"—they are keys to a healthy lifestyle. With healthful habits, students may reduce the risk of many chronic diseases such as heart disease, diabetes, osteoporosis, and certain cancers, and increase their chances for a longer life.

The science-based advice of the 2005 Dietary Guidelines for Americans highlights how to:

- Make smart choices from every food group— to include protein, whole grains, vegetables, fruits, and calcium-rich foods.
- Find the balance between food and physical activity.
- Know the limits for fats, sugar, and sodium and how to use the Nutrition Facts Panel.
- Play it safe with food—handle, prepare and store food safely.

Make Smart Choices from Every Food Group

Make half your grains whole.

Whole-grain wheat, corn, oats, and brown rice help contribute to a healthy diet by providing fiber and other nutrients. Foods made from grains are naturally low in fat unless fat is added during processing or as an ingredient in a recipe. Substituting whole grains for refined grains in foods such as bread, tortillas, taco shells and breakfast cereals is an easy way to increase fiber in your menus.

Vary your veggies.

Vegetables are key parts of a daily diet and can help reduce the risk of chronic disease. They provide vitamins, minerals, and fiber, and most are low in fat and calories and are filling. Variety is important because different vegetables are rich in different nutrients.

Weekly intake of specific amounts from each vegetable subgroup (dark green, orange, legumes [dry beans], starchy, and other vegetables) is recommended for adequate nutrient intake.

To help meet this recommendation, offer more:

- dark green veggies, such as broccoli, kale, and other dark leafy greens;
- orange veggies, such as carrots, sweet potatoes, pumpkin, and winter squash;
- beans and peas, such as pinto beans, kidney beans, black beans, garbanzo beans, split peas, and lentils.

Focus on fruits.

People who eat a variety of fruits as part of a healthy diet are likely to have reduced risk of some chronic diseases. Fruits are good sources of potassium, fiber, vitamin C, and folate; are naturally low in fat, sodium, and calories; and have no cholesterol. To help ensure adequate fiber intake, consuming fruits (fresh, frozen, canned, dried) rather than fruit juice for most of your fruit choices is recommended.

Get your calcium-rich foods.

Consuming foods from the milk group is important for a healthful diet. Drinking and eating foods from the milk group is especially important to children and adolescents, who are developing bone mass and acquiring lifelong habits. Milk and milk products also provide protein and other vitamins that are key to growth and development. Choose fat-free and low-fat milk, cheese, yogurt, and other milk products as part of an overall healthy diet.

Go lean with protein.

Lean meat, poultry, fish, dry beans or peas, eggs, nuts, and seeds are protein foods and essential for the health and maintenance of the body. Protein is especially important to children and adolescents during their growth stages because proteins function as building blocks for bones, muscles, cartilage, skin, and blood. Including fish, nuts, and seeds helps to provide healthy oils within the diet. Varying choices of lean protein daily can help limit excess saturated fat and cholesterol.

Find the Balance between Food and Physical Activity

Get the most nutrition out of your calories

Many Americans consume more calories than they need without meeting recommended intakes for a number of nutrients. Healthy school meals can assist children in consuming a variety of nutrient-rich foods and beverages while choosing foods that limit the intake of saturated and *trans* fats, cholesterol, added sugars, and salt. Nutrient-rich foods are those foods that provide substantial amounts of vitamins and minerals and relatively fewer calories.

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Foods contain combinations of nutrients and other healthful substances. No one food provides all the nutrients needed for good health. By choosing foods in specified amounts from every food group, a healthful diet with essential nutrients and energy needed to prevent nutritional deficiencies and excesses will be ensured. A healthful diet also provides the right balance of carbohydrate, fat, and protein to reduce risks for chronic disease.

The right number of calories to eat each day depends on age, gender, activity level, and whether one is trying to gain, maintain, or lose weight. Students could use up the entire amount of their daily calories on a few high-calorie items, but chances are they won't get the full range of vitamins and nutrients their body needs to be healthy.

Choose nutrient-rich foods from each food group each day—those packed with vitamins, minerals, fiber, and other nutrients but lower in calories. Serve foods like fruits, vegetables, whole grains, fat-free or low-fat milk and milk products, and lean meats, fish, poultry, beans and nuts.

Get adequate nutrients within calorie needs.

Finding the balance between food and physical activity offers important benefits normal growth and development of children, health promotion for all ages, and reduction in chronic diseases that are major public health problems. Overweight and obesity in the United States among adults and children has increased significantly over the last two decades. Poor diet and physical inactivity are important factors contributing to the increase in overweight and obesity.

Healthy school meals can assist children in maintaining a healthy weight. Weight gain results when more food is consumed than the body needs. Calorie needs of children differ due to body size, growth spurts, and varying levels of physical activity.

Eating and physical activity habits begin in childhood. Children are influenced by the foods served at meals and snacks and by watching what others eat and the physical activity that they do. Encourage children to be physically active.

What's important to know about calories?

1) Different foods provide different amounts of calories.

It can be a challenge to get the appropriate amount of calories for our age, size, and activity level — and get those calories from a variety of nourishing foods without too much fat, saturated fat, *trans* fat, and added sugars. But this is recommended in the Dietary Guidelines for Americans.

Thanks to the nutrition information that's available on most food labels, we can know at a glance how many calories a serving of a particular item will give us. We can also see what percentage of those calories come from fat, and saturated fat.

2) Adequate calories are important to children's health. Calorie levels are part of school meal requirements for breakfast and lunch.

Menu planners need to be careful to make sure children get enough calories for growth and activity. This is why the *School Meals Initiative for Healthy Children* sets specific calorie goals for breakfast as well as lunch.

Children and teens are growing rapidly. They need plenty of energy — not only for physical activity, but for proper growth and development as well. Their calorie and nutrient needs are determined not only by age, gender, and activity level but also by size.

Between the ages of 2 and 9 years, a typical child will gain about 4 to 5 pounds per year. The average teenage boy will have his greatest growth from ages 12 through 16 years, during which time he may add approximately 12 inches in height and 50 to 60 pounds in weight. A teenager participating in a competitive sport may need up to 3,000 calories per day.

3) There is a substantial increase in nutrient and calorie needs of children between the ages of 10 and 11 years old.

As a result, students in Grades 7-12 will not have their calorie and nutrient needs met by menus planned for Grades K-6. This is very important to keep in mind as you select age and grade groups and plan meals to reflect the structure of your school(s).

4) As we make an effort to meet the Dietary Guidelines, we must replace the calories lost from limiting fat with calories from foods that are generally lower in fat, especially whole-grain products, vegetables, and fruits.

Each of the menu planning approaches — Enhanced Food-Based, Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP) — have built-in methods to ensure that calorie needs for energy and growth are met as fat and saturated fat are reduced.

The Enhanced Food-Based Menu Planning approach requires increased amounts of grains, vegetables, and fruits.

NSMP and Assisted NSMP require meeting specific age-related calorie goals as measured through the menu nutrient analysis.

The Traditional Food-Based Menu Planning approach does not have any built-in features to accomplish this goal. As a result, schools selecting the Traditional meal pattern must be careful to replace the calories lost from reducing total fat.

Be physically active every day

Becoming healthier isn't just about eating healthy—it's also about physical activity. Regular physical activity is important for overall health and fitness. It also helps control body weight by balancing the calories taken in as food with the calories expended each day. People with higher levels of physical fitness are at lower risk of developing chronic disease.

Physical activity helps children have fun, maintain a healthy weight, and:

- Helps build endurance and muscle strength,
- Develop a healthy heart and lungs, bones, and joints, and
- Improve their self-esteem and feelings of well-being.

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Children need at least 60 minutes every day and adults need at least 30 minutes of moderate intensity physical activity preferably all days of the week, or most days. Increase the amount of time and endurance of your physical activity for added health benefits and weight management.

Some schools have found that recess before lunch helps students relax and be ready to eat. Work with your school to determine the best time for recess for your students.

Know the Limits

Know your fats-Look for foods low in saturated fats, trans fats, and cholesterol.

Fats and oils are part of a healthful diet, but the type of fat makes a difference to heart health, and the total amount of fat consumed is also important. Health professionals believe that food habits established in childhood are important in preventing heart disease later in life. They recommend reducing the risk of heart disease by decreasing the amount of total fat, saturated fat, *trans* fat, and cholesterol in the diet. Including healthy fats in the diet and using them in moderation is key to heart health as well as weight management.

The 2005 Dietary Guidelines for Americans recommend a total fat intake for adults between 20 and 35 percent of calories, and from 25 to 35 percent of calories for children and adolescents 4 to 18 years of age, with most fats coming from sources such as fish, nuts, and vegetable oils. They also recommend consuming less than 10 percent of calories from saturated fat and less than 300 mg/day of cholesterol, and keeping *trans* fat consumption as low as possible.

Changes to reduce the amount and type of fat in meals must be practical and acceptable. As children begin to consume fewer calories from fat, they should replace these calories by eating more whole-grain products, vegetables, fruits, and low-fat or fat-free milk and milk products and lean protein-rich foods.

Don't sugarcoat it—Choose and prepare foods and beverages with little added sugars or caloric sweeteners.

Sugars and many foods that contain them in large amounts supply calories, but they may be limited in vitamins and minerals. Consuming excess calories from foods high in added sugars may contribute to weight gain and lower intake of more nutritious foods. Foods containing sugars and starches also promote tooth decay. Frequently eating or drinking sweet or starchy foods between meals is more likely to harm teeth than eating the same foods at meals and then brushing.

Use the following list to identify the most commonly eaten foods that are high in added sugars (unless they are labeled "sugar free" or "diet"). Limit the use of these beverages and foods. Offer water or low-fat or fat-free milk as a beverage to children.



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The major sources of added sugars in the United States include:

- 1) Soft drinks
- 2) Sugars and candy
- 3) Cakes, cookies, pies
- 4) Fruitades and drinks such as fruit punch and lemonade
- 5) Dairy desserts and milk products such as ice cream, sweetened yogurt, and sweetened milk.

Foods contain sugars in various forms. Read ingredient labels for clues on sugar content. A food is likely to be high in sugars if one of these names appears first or second in the ingredient list or if several names are listed: *sucrose, glucose, maltose, dextrose, lactose, fructose, honey, fruit juice concentrate, brown sugar, corn sweetener, corn syrup, high fructose corn syrup, invert sugar, malt syrup, molasses, raw sugar, syrup, table sugar.*

Reduce sodium (salt) and increase potassium.

Many people can reduce their chances of developing high blood pressure by consuming less salt. Currently there is no way to predict who will develop high blood pressure from eating too much salt. The 2005 Dietary Guidelines recommends:

- Consuming less than 2,300 mg of sodium (about 1 teaspoon of salt) per day.
- Consuming and preparing foods with little salt.
- Consuming potassium-rich foods such as fruits and vegetables.

Research shows that eating less than about 1 teaspoon of salt per day may reduce the risk of high blood pressure. Most of the sodium people eat comes from processed foods, not from the salt shaker. Most Americans consume more salt and sodium than they need. Prepare foods with little salt and choose lower sodium prepared menu items.

Foods with added salt include cured and processed meats, cheeses, and some highly processed foods, such as ready-to-eat snacks, prepared frozen entrées, packaged mixes, canned soups, and salad dressings. Check the sodium content on the Nutrition Facts label and select foods that have less sodium. Foods that are low in sodium (less than 140 mg or 5 percent of the Daily Value [DV]) are low in salt.

Also, encourage children to consume potassium-rich foods, such as fruits (i.e., bananas, orange juice) and vegetables (i.e., sweet potatoes, spinach, tomato products) which counteract some of sodium's effects on blood pressure. When children learn to enjoy meals and snacks without excess salt, they may be protecting themselves from future health problems.

NUTRITION: Know the facts...

Most packaged foods have a Nutrition Facts label. Use this tool to make smart food choices quickly and easily. Try these tips:

- Keep these low: saturated fats, *trans* fats, cholesterol, and sodium.
- Get enough of these: potassium, fiber, vitamins A and C, calcium, and iron.
- Use the % Daily Value (DV) column on the Nutrition Facts Label when possible: 5% DV or less is low, 20% DV or more is high.
- 2,000 calories is the value used as a general reference for adults on the food label. But you can calculate the number of calories that you need at *MyPyramid.gov*.

Make your calories count. Look at the calories on the label and compare them with what other nutrients are in the food to decide if the food provides a high amount of nutrients for the number of calories. When one serving of a single food item has over 400 calories per serving, it is high in calories. Are there also high amounts (>20% DV) of vitamins and minerals for the amount of calories?

Check servings and calories. Look at the serving size and how many servings are actually in the package. If you double the serving size, you double the amount of calories and nutrients, including the % DVs.

Know the limits on fats, salt, and sugars. Read the Nutrition Facts label on foods. Look for foods low in saturated fats and *trans* fats. Choose, prepare, and serve foods and beverages with little salt (sodium) and/or added sugars (caloric sweeteners).

Play it safe with food-handle, prepare, and store food safely.

All those who handle food have a responsibility to keep food as safe as possible. Safe food has little risk of causing foodborne illness (food poisoning). Foodborne illness is caused by eating food that contains harmful bacteria, toxins, parasites, viruses, or chemical or physical contamination.

Young children are at high risk of foodborne illness so be careful to prepare and serve foods using food safety precautions. Never serve unpasteurized juices, unpasteurized milk, fresh bean sprouts, or foods containing raw eggs.

Food handling, sanitation, and safety are regulated by state, county, and city health department codes. Become familiar with the regulations to prevent foodborne illness.

Use Safe Handling and Storage Techniques

- Be aware of the condition in which perishable foods are purchased and delivered. Inspect foods to make sure frozen foods are frozen solid and refrigerated foods are at the appropriate temperatures.
- Improper temperature control before and after purchasing or delivery can shorten a food's shelf life.
- Date incoming food items. Rotate stock properly. Placing oldest food out front will encourage the use of foods on a "first-in, first-out (FIFO)" basis.

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- Keep a daily log of temperature readings. Temperature logs should be maintained for cooking, cooling, holding, and reheating procedures and for refrigerators and freezers.
- Keep cold foods cold (41 °F or below) and hot foods hot (135 °F or above). Bacteria can grow rapidly between 41°F and 135 °F, which includes room temperature. This is known as the danger zone.
- Test internal temperatures of the food before placing it onto a salad bar, display cooler, steam table, or serving line and at least every 2 hours thereafter with a food thermometer.
- Use leftovers only once, and then throw any remaining food away. Despite the appearance of a food, it may not be safe to eat. Safe disposal is indicated if there is a question of whether or not a food is safe to eat. "If in doubt, throw it out."

KEEPING FOOD SAFE TO EAT

The four core messages of Clean, Separate, Cook and Chill will help you keep the food that you serve safe to eat.

Clean

Practice good personal hygiene

- Adequately restrain hair by using a hairnet or hat.
- Wash hands frequently and properly, for at least 20 seconds with soap and *hot water*. Use a *separate* hand sink, not sinks used for food preparation or dishwashing. Always wash hands after touching hair or face.
- Use disposable towels when drying hands. Discard disposable towels after each use.
- Cough or sneeze into disposable tissues ONLY, and wash hands afterwards. If you sneeze on food or food production areas, discard the food and clean and sanitize the food production area.
- Persons with colds, or other communicable diseases should not be permitted to work in food preparation areas.
- All superficial cuts should be covered with a bandage and a disposable glove.
- Any person with an infected cut or skin infection should not be permitted to work with food.
- Use disposable gloves properly. Wash hands before putting on gloves, avoid touching skin, carts, refrigerator, freezer, or oven doors or any unclean surfaces. Throw the gloves away after using or touching anything other than food.

Keep equipment and facilities clean and sanitized

• Clean food preparation and refrigerator surfaces often to eliminate contamination from foods such as raw meats, poultry, fish, uncooked hot dogs, deli meats, and raw vegetables to other foods.

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- Keep all equipment such as cutting boards, can openers, grinders, slicers, and work surfaces clean and sanitized. Sanitize equipment and work surfaces between use with raw and cooked foods. Check with local health department codes for a list of sanitizing agents.
- Use plastic cutting boards. Purchase adequate number of cutting boards to prevent cross contamination during food production.
- Wash and sanitize cutting boards in a dishwasher whenever possible. Air dry.
- Follow manufacturer's directions for proper wash and rinse temperatures, when using a mechanical dishwasher.
- *Air drying is recommended*: drying with a towel swabs contaminants over the surface.



Wash Fresh Fruits and Vegetables

- Wash your hands properly before preparing fresh fruits and vegetables.
- Since many fresh fruits and vegetables are served without being cooked, thorough cleaning is critical in preventing foodborne illness.
- Wash all raw fruits and vegetables thoroughly before combining with other ingredients, including unpeeled fresh fruit and vegetables that are served whole or cut into pieces, and fruits and vegetables that are peeled and cut to use in cooking or served ready-to-eat. Wash fresh produce vigorously under cold running water or by using chemicals that comply with the FDA Food Code. Scrub the surface of firm fruits or vegetables such as apples, melons or potatoes using a clean and sanitized brush designated for this purpose.
- Packaged fruits and vegetables labeled as being previously washed and ready-to-eat are not required to be washed.
- For more information on purchasing, preparing, and storing fruits and vegetables, see *The Food Buying Guide for Child Nutrition Programs* at teamnutrition.usda.gov/Resources/foodbuyingguide.html, and *Fruits and Vegetables Galore: Helping Kids Eat More* at www.teamnutrition.usda.gov/Resources/fv_galore.html.

Separate

Avoid cross-contamination

- Use appropriate utensils to pick up and handle food.
- Never touch ready-to-eat foods with your bare hands.
- If using hands, wear disposable plastic gloves and do not touch anything unclean with the gloves. Throw the gloves away after using or touching anything other than food.
- Do not prepare ready-to-eat foods, such as salads, fruits, or vegetables on the same surface that you use to prepare raw uncooked foods, such as raw meats, poultry or fish.

- As a food safety precaution, you may want to use two sets of cutting boards: one for meats, and one for vegetables and fruits. Buying plastic cutting boards in different colors will help to keep them straight.
- Store ready-to-eat foods *above* raw uncooked foods.
- Store raw meat, poultry, eggs, fish, and shellfish in containers on the bottom shelf of the refrigerator and away from ready-to-eat foods, such as lettuce, cut melons, and lunch meats during receiving, storage, and preparation.
- Prevent juices from raw meat, poultry, or seafood from dripping on ready-to-eat foods, such as salad greens, lunch meats, and cut melons during receiving, in the refrigerator, and during preparation.

Cook

Follow directions

• Follow the directions on the food labels to ensure that proper cooking methods, time, and temperature are used. Also, refer to recipes for specific cooking instructions.

Cook thoroughly

- Cook meat, poultry, fish, shellfish, and leftovers to the correct internal temperature (see chart below).
- To make sure that meat and poultry are cooked all the way through, use a food thermometer.
- Calibrate thermometers on a regular basis.

Cook completely

- DO NOT partially cook foods. Partial cooking may encourage bacteria to grow before cooking is completed.
- Cook foods to minimal required internal temperatures for safety.

Minimum Internal Temperatures for Safety

(based on the 2005 FDA Food Code)

165 °F for 15 seconds	Poultry, stuffing, stuffed fish, pork or beef; pasta stuffed with eggs, pork, casseroles, reheating leftovers.
155 °F for 15 seconds	Ground meats, beef, lamb, veal, pork, pasteurized eggs held on steam table, cubed or Salisbury steaks, fish nuggets or sticks
145 °F for 15 seconds	Seafood, beef, pork, veal steaks, & roasts (medium rare), eggs cooked to order and served immediately.
135 °F for 15 seconds	Fresh, frozen, or canned fruits and vegetables that are going to be held on a steam table or in a hot box.

Keep Hot Foods Above 135°F

- Limit the amount of holding time by batch cooking. Test internal temperatures of the food before placing it onto steam table, or serving line and at least every 2 hours thereafter with a food thermometer.
- Avoid holding foods in the temperature danger zone (between 41°F and135°F). If the serving of a hot food must be delayed, keep it at a holding temperature of 135 °F or above.

Chill

Refrigerator Storage - Keep Cold Foods at 41°F or Below

- Check refrigerators and freezers frequently with an appliance thermometer. The refrigerator should register 41°F or below. Keep a daily log of temperature readings.
- Cool hot food from 135°F to 70°F within 2 hours. If during the cooling process food temperatures do not reach 70°F immediate action is required or food must be discarded. Cool foods from 70°F to 41°F or below within 4 hours. DO NOT ALLOW ANY FOODS TO COOL AT ROOM TEMPERATURE.
- Refrigerate or freeze properly cooled leftovers in covered, 2-inch shallow containers.
- Divide large containers of soups, sauces, or vegetables so that the smaller portions will cool more quickly. Stirring throughout the chilling process will shorten the total cooling time. An ice paddle or ice bath will also help to rapidly cool foods.
- Leave airspace around containers or packages to allow circulation of cold air so that rapid cooling is ensured.
- Read the labels of bagged produce to determine if it is ready-to-eat. Keep refrigerated and serve before the "use-by" date.
- Date foods so that the length of storage time is easily known. DO NOT taste old leftovers. *When in doubt, throw it out!*

Freezer Storage

- Freeze all food items that you don't plan to use within 2 days.
- While "freezer burn" will not cause illness, it does make certain food tough and tasteless. To avoid "freezer burn" wrap freezer items in heavy freezer paper.
- Label and date freezer packages so that the oldest products can be used first, using the first-in, first out (FIFO) method.
- Place new items to the rear of the freezer, and older items to the front.
- Be sure that thermometers are clearly visible, from the outside of the freezer, so that they can be read and recorded in a log daily.
- The freezer should read 0°F or lower.
- It is safe to freeze foods in their supermarket wrappings, but, if storing for longer than 2 months, rewrap in foil, plastic, or freezer paper.
- Freezing does not destroy bacteria. Bacteria become active again once food is thawed.

Thawing

• Thaw meat, poultry, fish, or shellfish in the refrigerator, microwave (cook immediately), or cold water.

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- Thaw frozen meat, poultry, and fish in the refrigerator until pliable (easy to separate).
- DO NOT THAW FOODS AT ROOM TEMPERATURE.

For more information, contact:

- USDA's Meat and Poultry Hotline, 1-888-MP-Hotline (1-888 674-6854).
- FDA's Food Information Center, 1-888-SAFEFOOD (1-888-723-3366).
- www.foodsafety.gov
- www.fightbac.org
- www.fsis.usda.gov/Food_Safety_Education/index.asp

PUTTING IT ALL TOGETHER...

Simple changes, taken one at a time, can add up to a lifetime of better eating habits. The key is to make changes that are right for you and your customers. Examples of how to apply the principles of the Dietary Guidelines in menu planning are the focus of Chapter 4.

Keep these ideas in mind as you apply the Dietary Guidelines for Americans to your menus:

- Remember that children are the prime focus.
- Make gradual changes over time.
- Provide tasty and interesting food choices.

For best results, integrate the food service program with the entire school:

- Promote the program in the school and with parents in the community.
- Work closely with teachers to coordinate nutrition education in the classroom and cafeteria.
- Enlist the support of administrators and boards of education to develop policies that support healthy eating and physical activity.
- Set small goals and achieve them—success promotes success.

MyPyramid

MyPyramid is a symbol that shows how everyone can make food choices for a healthful diet as described in the 2005 Dietary Guidelines for Americans. MyPyramid is not a rigid prescription; it is a personalized guide that lets you choose a healthful diet that is right for you and the children in your program. By using MyPyramid which is shown below, you and your children can get a good picture of the kinds of foods to eat. Access the guide at MyPyramid.gov.



MyPyramid divides food into five major food groups: grains, vegetables, fruits, milk, and meat and beans. Each of these food groups provides some, but not all, of the nutrients and energy children need. For proper growth and good health, children need to eat a variety of different foods each day. Each food group is important and foods from each group should be consumed daily in proper amounts. Proportion is shown by the different widths of the food group bands. The widths suggest how much food a person should choose from each food group. The smallest band of MyPyramid, shown in yellow, represents oils. Oils are not a food group, but you need some for good health.

MyPyramid for Kids

USDA adapted MyPyramid to provide special guidance for children found at *teamnutrition.usda.gov/kidspyramid.html*. Like the traditional MyPyramid, MyPyramid for Kids is an outline of foods to eat each day based on the Dietary Guidelines for Americans. It similarly promotes balanced meals, moderation, and a variety of food choices, with special emphasis on grain products, fruits, and vegetables. Notice the different activities of the children playing around the pyramid. The message is that



physical activity is also important to good health and can be achieved in many different ways.
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What is the focus of MyPyramid for Kids? The focus of MyPyramid for Kids is to teach children how to choose a variety of healthy foods from each food group daily. It divides foods into five major food groups: Grains, Vegetables, Fruits, Milk, and Meat and Beans. Each color band represents the amount of food from that group that should be eaten daily.

The foods shown in MyPyramid are those that many children know and enjoy. Each of these food groups provides some, but not all, of the nutrients and energy children need. No one food group is more important than another. For proper health and proper growth, children need to eat a variety of different foods each day.

How can you order MyPyramid materials?

To order MyPyramid materials, go to teamnutrition.usda.gov.

CHAPTER 2



Food-Based Menu Planning: Traditional and Enhanced

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CHAPTER 2



Food-Based Menu Planning: Traditional and Enhanced

n this chapter, we'll take a closer look at Food-Based Menu Planning — Traditional and Enhanced. As we'll do in Chapter 3 for Nutrient-Based Menu Planning, we will look at the following areas:



- Nutrition Goals
- Nutrient Standards and Age/Grade Groups
- Criteria for a Reimbursable Meal
- Meal Structure for Lunch
- Meal Structure for Breakfast
- Offer versus Serve for Lunch
- Offer versus Serve for Breakfast
- Standardized Recipes
- Processed Foods
- Production Records
- Child Nutrition Labeling

For easy reference, these features are summarized in the chart in Appendix 1. Appendix 2 summarizes these features for Nutrient-Based Menu Planning: Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP).

The Traditional and Enhanced menu planning approaches share the same nutrition goals, but they have different age/grade groups. They also have different meal structures for lunch. You will notice other similarities and differences, too.

First, an overview:

Food-Based Menu Planning approaches use meal patterns and age/grade groups as planning tools. As we saw in Chapter 1, both Traditional and Enhanced Food-Based Menu Planning require specific food group components be served in specific amounts.

Both use meal patterns that are designed to provide over time: 1/3 of the 1989 Recommended Dietary Allowances (RDA) for key nutrients for a specific age/grade group for lunch; and 1/4 of the 1989 RDA for key nutrients for breakfast. However, the meal pattern for Enhanced Food-Based Menu Planning goes beyond the Traditional meal pattern in significant ways.

In addition to providing 1/3 of RDA for lunch and 1/4 of RDA for breakfast, the Enhanced Food-Based meal pattern is designed to:

- provide 1/3 of the *calories* needed for specific age/grade groups for lunch
- provide 1/4 of the *calories* needed for specific age/grade groups for breakfast
- help ensure consistency with the 1995 Dietary Guidelines for Americans

What does this mean for you in practical terms?

If you select Enhanced Food-Based Menu Planning instead of the Traditional approach, you may have an easier time meeting the nutrition goals outlined in Chapter 1 because the meal patterns for this approach have been designed specifically with the nutrition goals in mind.

While you may be able to meet the nutrition goals with Traditional Food-Based Menu Planning, you will need to be extra careful to reach the target goals for key nutrients and calories as well as the recommended levels for fat and saturated fat.

Serving plenty of whole grains, vegetables, and fruits will be important. So will using lower fat versions of products and preparing foods in ways that get rid of excess fat, such as draining cooked meats and using skinless chicken parts, where possible. You will find a variety of tips like these in Chapters 4 and 6.

In Appendix 3, you will also find information on the *USDA Recipes for Schools (2006)*, which have been distributed to schools nationwide. These recipes were prepared specifically with the Dietary Guidelines in mind, and each recipe includes a nutrient analysis and food safety critical control points. The recipes can be used easily with Traditional or Enhanced Menu Planning or with NSMP and Assisted NSMP.

1. Nutrition Goals

What are the nutrition goals for Food-Based Menu Planning? How will your menus be monitored for compliance with them?

For both Traditional and Enhanced Food-Based Menu Planning, the chart in Appendix 1 states:

Menus must meet nutrition goals when averaged over a school week and analyzed by the State agency during a State nutrition review.

In other words, your objective is the same for *both* Traditional and Enhanced Food-Based approaches — to plan menus that meet the nutrition goals when averaged over a school week for:

- 1989 Recommended Dietary Allowances (RDA) for key nutrients
- Calories
- 1995 Dietary Guidelines for Americans

This is the same objective as for NSMP and Assisted NSMP.

To accomplish this objective, will you need to do a nutrient analysis of menus with Food-Based Planning?

No. You are *not required* to do a nutrient analysis of the menu for either Traditional or Enhanced Food-Based Menu Planning.

An analysis will be done by your State agency at the time of the State review. The State agency will check to see if menus are on track for key nutrients, calories, and the 1995 Dietary Guidelines recommendations on fat and saturated fat. During this nutrition assessment, the State agency will need to see production records, nutrient data (such as from manufacturers), and recipes used.

This means that you are not required to use computer hardware or nutrient analysis software. However, you may want to do an analysis — perhaps a computer analysis — for planning purposes and to assess your progress.

To summarize:

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1) With either the Traditional or Enhanced approach, menus must do *both* of the following:

First, menus must provide the required number of food components and food items for each meal and per week.

Second, menus must meet the nutrient standards for the age/grade group you are serving when averaged over a school week.

- 2) While the four food *components* for lunch are the same for both Traditional and Enhanced approaches....
 - Meat/Meat Alternates
 Grains/Breads
 - Vegetables/Fruits
 Milk
 - ... there are different meal *patterns* for the two approaches.
- 3) And, because the Enhanced meal patterns were designed as part of the 1995 *School Meals Initiative for Healthy Children*, they provide required foods in proper portion sizes to meet the nutrition goals.

2. Nutrient Standards and Age/Grade Groups

What are nutrient standards and what is their purpose? How do they relate to age/grade groups?

The nutrient standards are an important part of USDA's *School Meals Initiative for Healthy Children*. They were established for all of the menu planning approaches by studying the nutritional needs of groups of children of different ages. What exactly are they? Nutrient standards are the required minimum levels of calories and key nutrients to meet the nutrition goals for specific age or grade groups of children for breakfast and lunch menus.

The charts on pages 27 through 30 show the nutrient standards for several age/grade groups — first for lunch, then for breakfast. In each case, the charts show *school week averages* for:

- Calories also called "Energy Allowances."
- Five key nutrients protein, calcium, iron, vitamin A, and vitamin C.
- Total fat not to exceed 30 percent of calories over a school week.
- Saturated fat to be less than 10 percent of calories over a school week.

Note that for both total fat and saturated fat, the grams of fat will vary depending on actual level of calories. Also keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.

If You Are Planning LUNCH with the TRADITIONAL Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-3	Grades 4-12	Grades 7-12 Optional	
Energy Allowances (Calories = cal.)	517 cal.	633 cal.	785 cal.	825 cal.	
Protein (grams = g)	7 g	9 g	15 g	16 g	
Calcium (milligrams = mg)	267 mg	267 mg	370 mg	400 mg	
Iron (milligrams = mg)	3.3 mg	3.3 mg	4.2 mg	4.5 mg	
Vitamin A (Retinol Equivalents = RE)	150 RE	200 RE	285 RE	300 RE	
Vitamin C (milligrams = mg)	14 mg	15 mg	17 mg	18 mg	
Total fat	No more than 30 percent of total calories should come from fat.				
Saturated fat	Less than 10 percent of total calories should come from saturated fat.				

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

If You Are Planning LUNCH with the ENHANCED Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-6	Grades 7-12	Grades K-3 Optional
Energy Allowances (Calories = cal.)	517 cal.	664 cal.	825 cal.	633 cal.
Protein (grams = g)	7 g	10 g	16 g	9 g
Calcium (milligrams = mg)	267 mg	286 mg	400 mg	267 mg
Iron (milligrams = mg)	3.3 mg	3.5 mg	4.5 mg	3.3 mg
Vitamin A (Retinol Equivalents = RE)	150 RE	224 RE	300 RE	200 RE
Vitamin C (milligrams = mg)	14 mg	15 mg	18 mg	15 mg
Total fat	No more the should come	an 30 percent of e from fat.	total calories	
Saturated fat	Less than 10 percent of total calories should come from saturated fat.			

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

If You Are Planning BREAKFAST with the TRADITIONAL Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-12	
Energy Allowances (Calories = cal.)	388 cal.	554 cal.	
Protein (grams = g)	5 g	10 g	
Calcium (milligrams = mg)	200 mg	257 mg	
Iron (milligrams = mg)	2.5 mg	3.0 mg	
Vitamin A (Retinol Equivalents = RE)	113 RE	197 RE	
Vitamin C (milligrams = mg)	11 mg	13 mg	
Total fat	No more than 30 percent of to should come from fat.	otal calories	
Saturated fat	Less than 10 percent of total calories should come from saturated fat.		

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

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If You Are Planning BREAKFAST with the ENHANCED Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-12	Grades 7-12 Optional	
Energy Allowances (Calories = cal.)	388 cal.	554 cal.	618 cal.	
Protein (grams = g)	5 g	10 g 12 g		
Calcium (milligrams = mg)	200 mg	257 mg	300 mg	
Iron (milligrams = mg)	2.5 mg	3.0 mg	3.4 mg	
Vitamin A (Retinol Equivalents = RE)	113 RE	197 RE	225 RE	
Vitamin C (milligrams = mg)	11 mg	13 mg	14 mg	
Total fat	No more than 30 should come from	percent of total ca fat.	lories	
Saturated fat	Less than 10 percent of total calories should come from saturated fat.			

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

Food-Based Menu Planning: Traditional and Enhanced



What are meal patterns? How do they relate to age/grade groups?

An important step in Food-Based Menu Planning is determining the age/grade group or groups you will be serving and selecting the correct meal pattern(s). A meal pattern is the set of food components and food items and minimum quantities required for a reimbursable meal (lunch or breakfast) for a specific age/grade group.

The age/grade groups are designed to reflect the differing needs of younger and older children while also accommodating the grade structure of the majority of schools. Since not all schools will fall into these grade groups, some schools will need to use more than one grade group.

How many age/grade groups are there for Traditional and Enhanced menu planning? What are they? And how do they differ?

For school-age students (Grades K-12), both Traditional and Enhanced Food-Based Menu Planning approaches use two established age/grade groups for lunch and one established age/grade group for breakfast. However, while there are the same number of age/grade groups for both plans for lunch, the grades are grouped differently.

Similarly, while both Traditional and Enhanced approaches offer an additional *optional* age/ grade group for lunch, these optional groups are not the same. In addition, the Enhanced approach offers an optional age/grade group for breakfast as well as lunch.

Meal patterns for both Traditional and Enhanced approaches show the *minimum* amounts you must serve in order to meet the requirements for a particular age/grade group.

What about preschool children?

Meal patterns for both approaches include minimum quantities for two preschool age groups: Ages 1-2 years and Ages 3-4 years.

For school-age students (Grades K-12), what age/grade groups are used with TRADITIONAL Menu Planning?

1) For LUNCHES planned with the Traditional Food-Based approach:

There are *two established* age/grade groups. One is for Grades K-3. The other is for Grades 4-12. There is also an *optional* recommended third age/grade group, for Grades 7-12.

Does this mean that K-12 schools using the Traditional approach MUST use at least two age/grade groups every day?

USDA *requires* that schools meet the minimum amounts specified in the meal pattern for the appropriate age/grade group. USDA *highly recommends* using at least the two established age/grade groups, as well as the optional third group if possible. This is because the calorie and nutrient needs of children vary by age, gender, size, and activity level.

Some people ask if it is a good idea to streamline planning by using just one age/grade group for all of the children. The answer is no, and here's why: Schools *cannot* use the Grade K-3 pattern for the older children; the food will be insufficent and minimum requirements will not be met.

And, while it is technically *possible* to use the Grade 4-12 pattern for the younger children (since the meal patterns indicate minimum requirements), this is *not* recommended. The food provided by the Grade 4-12 pattern may be excessive for them.

For planning lunches with the Traditional approach, it is best to use the two established age/grade groups as well as the recommended (optional) third age/grade group.

2) For BREAKFASTS planned with the Traditional Food-Based approach:

Schools serving Grades K-12, must use the *one established* age/grade group. This is for Grades K-12.

For school-age students (Grades K-12), what age/grade groups are used with ENHANCED Menu Planning?

1) For LUNCHES planned with the Enhanced Food-Based approach:

Schools serving Grades K-12 use *two established* age/grade groups.

- One is for Grades K-6.
- The other is for Grades 7-12.

There is an additional *optional* age/grade group for Grades K-3. USDA highly recommends using this optional group along with the other two.

2) For BREAKFASTS planned with the Enhanced Food-Based approach:

Schools serving Grades K-12 must use at least the *one established* age/grade group. This is for Grades K-12.

They may also use an additional *optional* age/grade group for Grades 7-12. This is recommended to meet the increased nutrient needs of the older children.



3. Criteria for a Reimbursable Meal

With Traditional menu planning, how many food components and food items must a lunch include? How many for breakfast? What about Enhanced menu planning?

The chart in Appendix 1 uses similar wording here for both Traditional and Enhanced approaches. For Traditional Food-Based Menu Planning, it states:

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.

For Enhanced Food-Based Menu Planning, the wording is the same with the following exception: the word "Enhanced" (instead of "Traditional") comes before "meal pattern."

The wording is different because the two menu planning approaches use different meal patterns. As we've seen earlier, the patterns for the Enhanced approach have been specifically designed to help schools meet the nutrition goals through additional amounts of grains/ breads and vegetables/fruits.

On pages 35 through 55, you will find more information on lunch and breakfast requirements for Food-Based Menu Planning — both Traditional and Enhanced. You will also find answers to questions such as:

- How are food items counted for "crediting" under Traditional and Enhanced approaches? Is there a difference?
- Do all foods served in a meal, including condiments, count toward meeting the nutrient standards for the meal?
- What kind of adjustments are needed for school weeks that are longer or shorter than the typical 5 days?

4. Meal Structure for Lunch

- What are the minimum requirements by food component and age/grade group for lunches planned with the Traditional meal pattern? With the Enhanced meal pattern?
- What do the meal patterns for the Enhanced approach look like? How are they different from the Traditional meal patterns?

Both Traditional and Enhanced Food-Based Menu Planning approaches require certain food components to be served in certain amounts, depending on the age of the students. For both approaches, there are *four* food components for lunch — Meat/Meat Alternate, Grains/ Breads, Vegetables/Fruits, and Milk.

However, there are significant differences. As we have already seen, while both approaches use age/grade groups, they use *different* groups. Equally important, there are also noticeable differences in number of servings and portion sizes.

On the next several pages, we'll go over the meal structure for both approaches. First, we'll list the minimum requirements by age/grade group for each approach. Then we'll look at the meal patterns for each. Finally, we'll look at each of the meal components.

With both Traditional and Enhanced meal patterns, there are daily *and* weekly requirements for some food components. For instance, for a lunch planned with the Enhanced Menu Planning approaches, the requirement for Vegetables/Fruits for Grades K-6 is 3/4 cup per day *plus* an additional 1/2 cup over a week. You will see this on the meal pattern on pages 42 and 43.



For LUNCH with TRADITIONAL FOOD-BASED MENU PLANNING... What are the minimum requirements by food component and age/grade group for school-age (Grades K-12) students?

For the TRADITIONAL approach, the chart in Appendix 1 shows the following minimum requirements by age/grade group for each of the four components. You will also find these requirements on the meal pattern on pages 38 and 39.

Meat/Meat Alternate

For the two established age/grade groups:

Grades K-3: 1-1/2 oz Grades 4-12: 2 oz

For the recommended (optional) third age/grade group:

Grades 7-12: 3 oz

Grains/Breads

For the two established age/grade groups:

Grades K-3:	8 servings per week;
	minimum 1 serving per day
Grades 4-12:	8 servings per week;
	minimum 1 serving per day

For the recommended (optional) third age/grade group:

Grades 7-12: 10 servings per week; minimum 1 serving per day

• Vegetables/Fruits

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

For the two established age/grade groups:

Grades K-3: 1/2 cup per day

Grades 4-12: 3/4 cup per day

For the recommended (optional) third age/grade group:

Grades 7-12: 3/4 cup per day

• Milk

For all age/grade groups:

8 oz fluid milk as a beverage

If you select Traditional Food-Based Menu Planning, you will use the lunch meal pattern shown on the following two pages. Here are some things to keep in mind:

1. The FIVE required food items for a daily lunch are:

- One serving of Meat/Meat Alternate
- One serving of Grains/Breads
- Two servings of Vegetables (must be two different vegetables), or two servings of Fruits (must be two different fruits), or one of each
- One serving of Milk
- 2. For some components, servings are specified by day. For others, servings are specified on a daily and weekly basis.

3. Minimum requirements are shown.

The meal pattern shows the *minimum* number of servings and portion sizes for each of the required food components for lunches planned with the Traditional approach. You may increase portion sizes and add additional foods when needed.

4. Information is given for several different age/grade groups.

If your schools serve Grades K-12, it is best to use *at least* the two established age/grade groups. These are for Grades K-3 and Grades 4-12. To go even farther in targeting meals to the ages of the children you serve, you may also use the group shown in the last column. This group — for Grades 7-12 — is *recommended* although not required.

Because some schools serve very young children, the meal pattern also shows minimum quantities for children 1- to 2-years-old and preschoolers (children older than 2 years). USDA has not set nutrient standards for the 1- to 2-year-old group.

See pages 44 through 47 for more information on food components for lunch, including information on two "alternate" foods that may count as part of the Meat/Meat Alternate.

See Appendix 4 for more information on meeting the Grains/Breads requirement.

MEAL PATTERN FOR LUNCH — TRADITIONAL FOOD-BASED MENU PLANNING

• MEAT OR MEAT ALTERNATE:

Per day serve one of the following food items or a combination of these items to provide at least the quantity listed. The quantities shown are the edible portion as served.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
Lean meat, poultry, or fish	l oz	1-1/2 oz	1-1/2 oz	2 oz	3 oz
Cheese	l oz	1-1/2 oz	1-1/2 oz	2 oz	3 oz
Large egg	1/2	3/4	3/4	1	1-1/2
Cooked dry beans or peas	1/4 сир	3/8 сир	3/8 сир	1/2 сир	3/4 сир
Peanut butter or other nut or seed butters	2 Tbsp	3 Tbsp	3 Tbsp	4 Tbsp	6 Tbsp
Yogurt	4 oz or 1/2 cup	6 oz or 3/4 cup	6 oz or 3/4 cup	8 oz or 1 cup	12 oz or 1-1/2 cup

The following foods may be used to meet part of the Meat/Meat Alternate as explained below.

	Ages	Ages	Grades	Grades	Grades
	1-2 yrs	3-4 yrs	K-3	4-12	7-12*
Peanuts, soy nuts,	1/2 oz =	3/4 oz=	3/4 oz=	1 oz=	1-1/2 oz=
tree nuts, or seeds**	50 %	50%	50%	50%	50%

Explanation: ** These foods may be used to meet no more than 50% of this requirement. In addition, they must be used in combination with one or more of the other meat/meat alternates listed above.

* Grades 7-12: This is an optional age/grade group. USDA recommends using it along with the others.

• GRAINS/BREADS:

Must be enriched or whole grain or contain germ or bran.

A serving is...

A slice of bread or an equivalent serving of biscuits, rolls, etc.,

OR 1/2 cup of cooked rice, macaroni, noodles, other pasta products, or cereal grains.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
Minimum per WEEK:	5 serv	8 serv	8 serv	8 serv	10 serv
Minimum per DAY:	1/2 serv	1 serv	1 serv	1 serv	1 serv

• VEGETABLES/FRUITS:

At least two different vegetables and/or fruits must be offered. Minimum requirements per day...

Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*	
1/2 c	1/2 c	1/2 c	3/4 c	3/4 c	

• MILK (Fluid):

Must be served as a beverage.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*	
Per day:	6 fl oz	6 fl oz	8 fl oz	8 fl oz	8 fl oz	

* *Grades 7-12:* This is an optional additional age/grade group. USDA recommends using it along with the others.

For LUNCH with ENHANCED FOOD-BASED MENU PLANNING... What are the minimum requirements by food component and age/grade group for school-age (Grades K-12) students?

For the ENHANCED approach, the chart in Appendix 1 shows the following minimum requirements for each of the four components. You will also find these on the meal pattern on pages 42 and 43.

Meat/Meat Alternate

For the two established age/grade groups:

Grades K-6: 2 oz Grades 7-12: 2 oz

For the optional third age/grade group:

Grades K-3: 1-1/2 oz

• Grains/Breads

For the two established age/grade groups:

Grades K-6:	12 servings per week; minimum 1 serving per day
Grades 7-12:	15 servings per week; minimum 1 serving per day

For the optional third age/grade group:

Grades K-3:	10 servings per week;
	minimum 1 serving per day

Vegetables/Fruits

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

For the two established age/grade groups:

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

Grades 7-12: 1 cup per day

For the optional third age/grade group:

Grades K-3: 3/4 cup per day

• Milk

For all age/grade groups:

8 oz fluid milk as a beverage

If you select Enhanced Food-Based Menu Planning, you will use the lunch meal pattern shown on the following two pages. Here are some things to keep in mind:

1. The FIVE required food items for a daily lunch are:

- One serving of Meat/Meat Alternate
- One serving of Grains/Breads
- Two servings of Vegetables (must be two different vegetables), OR two servings of Fruits (must be two different fruits), OR one serving of each
- One serving of Milk
- 2. For some components, servings are specified by day. For others, servings are specified on a daily *and* weekly basis.

3. Minimum requirements are shown.

The meal pattern shows the *minimum* number of servings and portion sizes for each of the required food components for lunches planned with the Enhanced approach.

4. Information is given for several different age/grade groups. The two established grade groups for the Enhanced lunch pattern are Grades K-6 and 7-12.

If your schools serve Grades K-12, you must use at least the *two* established age/grade groups shown in columns 3 and 4 — these are for Grades K-6 and Grades 7-12. To go even farther in targeting meals to the ages of the children you serve, you may also use the optional third group shown in column 5 — for Grades K-3.

Because some schools serve very young children, the meal pattern also shows minimum quantities for children 1- to 2-years-old and preschoolers (children older than 2 years). USDA has not set nutrient standards for the 1- to 2-year-old group.

5. For the purposes of this chart, a week equals 5 days.

As you plan meals, you will need to incorporate weekly minimum servings of certain food items in addition to minimum daily servings. The meal pattern is based on a week of 5 consecutive days. If you are planning menus for a school week that is longer or shorter than 5 days, you will need to adjust accordingly. (See note in Grains/Breads section of the meal pattern.)

For programs that serve meals for more than 5 days per week or less than 5 days per week, the additional or reduced quantities should be prorated over the actual number of serving days.

See pages 44 through 47 for more information on food components for lunch, including information on two "alternate" foods that may count as part of the Meat/Meat Alternate.

See Appendix 4 for more information on meeting the Grains/Breads requirement.

MEAL PATTERN FOR LUNCH — ENHANCED FOOD-BASED MENU PLANNING

• MEAT OR MEAT ALTERNATE:

Per day serve one of the following food items or a combination of these items to provide at least the quantity listed. The quantities shown are the edible portion as served.

	Ages 1-2 yrs	Pre- school	Grades K-6	Grades 7-12	Grades K-3*
Lean meat, poultry, or fish	l oz	1-1/2 oz	2 oz	2 oz	1-1/2 oz
Cheese	1 oz	1-1/2 oz	2 oz	2 oz	1-1/2 oz
Large egg	1/2	3/4	1	1	3/4
Cooked dry beans or peas	1/4 сир	3/8 сир	1/2 сир	1/2 сир	3/8 сир
Peanut butter or other nut or seed butters	2 Tbsp	3 Tbsp	4 Tbsp	4 Tbsp	3 Tbsp
Yogurt	4 oz or 1/2 cup	6 oz or 3/4 cup	8 oz or 1 cup	8 oz or 1 cup	6 oz or 3/4 cup

The following foods may be used to meet part of the Meat/Meat Alternate as explained below.

	Ages	Pre-	Grades	Grades	Grades
	1-2 yrs	school	K-6	7-12	K-3*
Peanuts, soynuts,	1/2 oz=	3/4 oz=	1 oz=	1 oz=	3/4 oz=
tree nuts, or seeds**	50%	50%	50%	50%	50%

** These foods may be used to meet no more than 50% of this requirement. In addition, they must be used in combination with one or more of the other meat/meat alternates listed above.

* *Grades K-3:* This is an optional age/grade group. USDA recommends using it along with the others.

• GRAINS/BREADS:

Must be enriched or whole grain or contain germ or bran.

A serving is...

A slice of bread or an equivalent serving of biscuits, rolls, etc.,

OR 1/2 cup of cooked rice, macaroni, noodles, other pasta products, or cereal grains.

Up to one serving per day may be a grain-based dessert. (This applies only to Grades K-12, not to Ages 1-2 and Preschool.)

	Ages 1-2 yrs	Pre- school	Grades K-6	Grades 7-12	Grades K-3*
Minimum per WEEK:	5 serv	8 serv	12 serv	15 serv	10 serv
Minimum per DAY:	1/2 serv	1 serv	1 serv	1 serv	1 serv

In this chart, a week equals 5 days. If there are 7 days in the week, increase servings of Grains/Breads per week by:

- 5 servings for Grades K-6 to a total of 17 servings

- 6 servings for Grades 7-12 to a total of 21 servings

If the week has 3 days, decrease servings per week by:

- 5 servings for Grades K-6 to a total of 7 servings

- 6 servings for Grades 7-12 to a total of 9 servings

Increasing the number of servings of Grains/Breads is critical to the success of meeting the calorie requirements and implementing the Dietary Guidelines recommendations for dietary fiber.

• VEGETABLES/FRUITS:

At least two different vegetables and/or fruits must be offered. Minimum requirements per day:

Ages	Pre-	Grades	Grades	Grades
1-2 yrs	school	K-6	7-12	K-3*
1/2 c	1/2 c * 1/2	3/4 c** * plus an extr 2 cup over a v	l c a veek	

• MILK (Fluid):

Must be served as a beverage.

	Ages	Pre-	Grades	Grades	Grades
	1-2 yrs	school	K-6	7-12	K-3*
Per day:	6 fl oz	6 fl oz	8 fl oz	8 fl oz	8 fl oz

* *Grades K-3:* This is an optional age/grade group. USDA recommends using it along with the others.

More Information on Food Components for Lunch

The meal patterns on pages 36 through 43 show you what lunch looks like — first with Traditional Menu Planning, then with Enhanced. Here are more specifics on what is required for each of the four food components.

The requirements outlined here are the same for both Traditional and Enhanced approaches. They are *not* about quantities, except for a few instances where minimum serving sizes are given. For information on required quantities — which are different for the Traditional and Enhanced approaches — see the meal patterns.

Lunch - Meat/Meat Alternate Requirements:

- The serving of Meat/Meat Alternate may be contained only in the main dish plus one other menu item.
- Dry beans and peas may count as a Vegetable or as a Meat Alternate, but not as both in the same meal.
- A serving of cooked meat is lean meat without the bone.
- A serving of cooked fresh or frozen chicken or turkey includes meat and skin as normally served.
- Two "alternate" foods may count as part of the Meat/Meat Alternate as long as they are used according to USDA directions. These foods are: *vegetable protein products* and *enriched macaroni products with fortified protein*.

Lunch - Grains/Breads Requirements:

- Provide the required number of servings per day and per week.
- The minimum allowable serving size that may count toward meeting the required serving is 1/4 of a serving.
- The item must be whole grain or enriched or made from whole-grain or enriched meal or flour, or bran or germ; or if it is a cereal, the product must be whole grain, enriched, or fortified.
- If it is enriched, the item must meet the U.S. Food and Drug Administration's Standards of Identity for enriched bread, macaroni and noodle products, rice, or cornmeal.

What foods qualify as Grains/Breads for lunch?

To qualify as Grains/Breads for school lunches, foods must be enriched or whole grain or made from enriched or whole-grain meal 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:

- Breads that are enriched or whole grain.
- Biscuits, bagels, rolls, tortillas, muffins, or crackers made with enriched or whole-grain meal or flour.
- Cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat or couscous that are enriched, whole grain, or fortified.



- Ready-to-eat breakfast cereals that are enriched, whole grain, or fortified.
- 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 they are enriched, whole-grain, or fortified.
- Macaroni or noodle products (cooked) made with enriched or whole-grain flour. Macaroni products that have been fortified with protein may be counted to meet either a Grains/Breads or Meat/Meat Alternate requirement for lunch but not for both in the same meal.
- Sweet foods such as toaster pastries, coffee cake, doughnuts, sweet rolls, cookies, cakes or formulated grain-fruit products when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A shown in Appendix 4.
- Pie crust when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A in Appendix 4.
- Non-sweet snack products such as hard pretzels, hard bread sticks, and chips made from enriched or whole-grain meal or flour.

For additional information on the criteria for determining acceptable Grains/Breads and the minimum weight of a serving, see Appendix 4.

Lunch - Vegetables/Fruits Requirements:

- At least two different vegetables and/or fruits must be offered.
- Full-strength vegetable or fruit juice may be used to meet no more than 1/2 of the total requirement for lunch for Vegetables/Fruits.
- Fruit and vegetable concentrates can be used in either diluted or concentrated form.
- Dry beans and peas may count as a Vegetable or as a Meat Alternate, but not as both in the same meal.
- A serving of canned fruit may include the juice or syrup in which the fruit is packed unless otherwise indicated in USDA's *Food Buying Guide for Child Nutrition Programs*.
- A serving of thawed frozen fruit is the fruit plus the juice that accumulated during thawing.
- 1/8 cup of a vegetable or fruit is the minimum serving size which can be:
 (a) counted toward the required total servings and (b) counted as one of the two different Vegetables/Fruits.

Lunch - Milk Requirements:

- Provide one serving.
- Schools <u>must</u> offer fluid milk in a variety of fat contents and <u>may</u> offer flavored or unflavored milk and lactose-free fluid milk.

Counting food items for lunch...

What food items can be counted as meeting meal pattern requirements for lunch with Food-Based Menu Planning?

In the Child Nutrition Programs, the word "credit" is used to acknowledge that a particular food meets the requirements of one of the four required food components.

Only items which contain foods that can be credited as one of the five food items for lunch can be counted as meeting the meal pattern requirements.

For example, a typical chocolate pudding would not count as one of the food items for lunch. It does



not contain a food that can be credited as one of the five food items. Although chocolate pudding may contain milk, the milk requirement can only be met by serving fluid milk as a beverage.

Under Enhanced Menu Planning, a chocolate <u>bread</u> pudding MAY count as a grain-based dessert if it contains the required amount of bread to qualify for a serving of Grains/Breads. In contrast, with the Traditional Food-Based approach, the chocolate bread pudding served as dessert would <u>not</u> count toward the Grains/Bread requirement.

For more information on crediting of foods, see the Grains/Breads Instruction in Appendix 4. Also see USDA's Food Buying Guide for Child Nutrition Programs.

5. Meal Structure for Breakfast

What are the minimum requirements for breakfast? Is the meal structure the same for both the Traditional and Enhanced approaches? What does the breakfast meal pattern look like?

The chart in Appendix 1 shows *no* difference in the meal structure for breakfasts planned with the Traditional and Enhanced approaches. However, there is one difference in age/grade groups used — with the Enhanced approaches, there is an *optional* second age/grade group for Grades 7-12.

For breakfast with both the Traditional and Enhanced approaches, Appendix 1 shows the following servings for school-age students (Grades K-12):

Meat/Meat Alternate AND/OR Grains/Breads

For the one established age/grade group... Grades K-12: Two servings of Meat/Meat Alternate OR two servings of Grains/Breads OR one serving of each

• Juice/Fruit/Vegetable

For the one established age/grade group...

Grades K-12: 1/2 cup

• Milk

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For all age/grade groups:

8 oz fluid milk as a beverage OR on cereal OR both

If you are using the optional extra age/grade group for the Enhanced approach (Grades 7-12), you will need to serve one additional serving of Grains/Breads.

If you select Food-Based Menu Planning — Traditional or Enhanced — you will use the breakfast meal pattern shown on pages 50 and 51. Here are some things to keep in mind:

1. The FOUR required food items for a daily breakfast are:

- Two servings of Grains/Breads or two servings of Meat/Meat Alternate or one serving of each
- One serving of Milk
- One serving of Juice/Fruit/Vegetable

2. The number of food items for breakfast is a *daily* criteria.

The meal pattern specifies a minimum number and size of servings *per day* for each food item required.

3. Minimum requirements are shown.

The meal pattern shows the *minimum* number of servings and portion sizes for each of the required food components.

4. Information is given for several different age/grade groups.

As you can see, information is given for several different age/grade groups. Schools serving K-12 must use at least the one established age/grade group shown in column 3 — this is for Grades K-12. In addition, to better target the needs of children, K-12 schools using the Enhanced approach may *also* use the optional group shown in column 4 — for Grades 7-12.

Because some schools serve very young children, the meal pattern also shows minimum quantities for preschoolers as well as for children 1- to 2-years-old. USDA has not set nutrient standards for the 1- to 2-year-old group.

See pages 52 through 55 for more information on food components for breakfast.

See Appendix 4 for more information on meeting the Grains/Breads requirement.

MEAL PATTERN FOR BREAKFAST — TRADITIONAL or ENHANCED FOOD-BASED MENU PLANNING

• GRAINS/BREADS - and/or - MEAT/MEAT ALTERNATES:

Select ONE serving from EACH of these components to equal:

one GRAINS/BREADS - and one MEAT/MEAT ALTERNATE

OR select TWO servings from ONE of these components to equal:

two GRAINS/BREADS

- or -

two MEAT/MEAT ALTERNATES

• If you are using the optional extra age/grade group for the Enhanced approach (Grades 7-12), serve one additional serving of Grains/Breads.

GRAINS/BREADS:

You can serve one of the following food items or combine them to meet the requirements.

	Ages 1-2 yrs	Pre- school	Grades K-12	Grades 7-12*	
(a) Whole-grain or enriched bread	1/2 serv	1/2 serv	1 serv	1 serv	
(b) Whole-grain or enriched biscuit, roll, muffin, etc.	1/2 serv	1/2 serv	1 serv	1 serv	
(c) Whole-grain, enriched, or for- tified cereal	1/4 c or 1/3 oz	1/3 c or 1/2 oz	3/4 c or 1 oz	3/4 c or 1 oz	

* Optional extra age/grade group for the Enhanced approach. Recommended but not required.

MEAT/MEAT ALTERNATE:

You can serve one of the following food items or combine them to meet the requirements.

	Ages 1-2 yrs	Pre- school	Grades K-12	Grades 7-12*	
Meat, poultry, or fish	1/2 oz	1/2 oz	l oz	1 oz	
Cheese	1/2 oz	1/2 oz	1 oz	l oz	
Egg (large)	1/2 egg	1/2 egg	1/2 egg	1/2 egg	
Peanut butter or other nut or seed butters	1 Tbsp	1 Tbsp	2 Tbsp	2 Tbsp	
Cooked dry beans or peas	2 Tbsp	2 Tbsp	4 Tbsp	4 Tbsp	
Yogurt	2 oz or 1/4 cup	2 oz or 1/4 cup	4 oz or 1/2 cup	4 oz or 1/2 cup	
Nuts and/or seeds (see note below)**	1/2 oz	1/2 oz	l oz	l oz	

** No more than 1 oz of nuts and/or seeds may be served in any one meal.

• MILK (Fluid):

As a beverage or on cereal, or both.

Ages	Pre-	Grades	Grades
1-2 yrs	school	K-12	7-12*
1/2 сир	3/4 сир	8 fl oz	

• JUICE/FRUIT/VEGETABLE:

Include a minimum of one serving. You can serve a fruit or vegetable or both; or full-strength fruit or vegetable juice.

Ages 1-2 yrs	Pre- school	Grades K-12	Grades 7-12*	
1/4 сир	1/2 сир	1/2 сир	1/2 сир	

* Optional extra age/grade group for the Enhanced approach. Recommended but not required.

More Information on Food Components for Breakfast

By studying the meal pattern on pages 50 and 51, you can get a good idea of what a breakfast must include. However, you will also need to know the following:

Breakfast - Grains/Breads Requirements:

The meal pattern for a breakfast calls for a minimum of two servings of Grains/Breads OR two servings of Meat/Meat Alternate, OR one serving of each.

For Grains/Breads:

- The item must be whole grain or enriched or made from whole-grain or enriched meal or flour, or bran or germ; or if it is a cereal, the product must be whole grain, enriched, or fortified.
- If it is enriched, the item must meet the U.S. Food and Drug Administration's Standards of Identity for enriched bread, macaroni and noodle products, rice, or cornmeal.
- The minimum allowable serving size that can count toward meeting the required serving is 1/4 of a serving.

It is important to note that Grains/Breads components must either: (1) meet the quantities specified in USDA's Grains/Breads Instruction; or (2) provide the minimum required quantity of enriched flour/whole grain in each serving. (See Appendix 4.)



Shown here is Granola from *USDA Recipes for Schools (2006)*. The recipe publication includes many exciting breakfast and lunch recipes. See Appendix 3 for more information.

What foods qualify as Grains/Breads for breakfast?

To qualify as Grains/Breads for school breakfasts, foods must be enriched or whole grain or made from enriched or whole-grain meal 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:

- Breads that are enriched or whole grain.
- Biscuits, bagels, rolls, tortillas, muffins, or crackers made with enriched or whole-grain meal or flour.
- Cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat or couscous that are enriched, whole grain, or fortified.
- Ready-to-eat breakfast cereals that are enriched, whole grain, or fortified.
- Cereals or bread products that are used as an ingredient in another menu item such as crispy rice treats, oatmeal muffins, or breading on French toast sticks when they are enriched, whole grain, or fortified.
- Macaroni or noodle products (cooked) made with enriched or whole-grain flour.
- Sweet foods such as toaster pastries, coffee cake, doughnuts, sweet rolls, cookies, cakes or formulated grain-fruit products when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A shown in Appendix 4.
- Pie crust when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A shown in Appendix 4.
- Non-sweet snack products such as hard pretzels, hard bread sticks, and chips made from enriched or whole-grain meal or flour.

For additional information on the criteria for determining acceptable Grains/Breads and the minimum weight of a serving, see Appendix 4.

Breakfast - Meat/Meat Alternate Requirements:

The meal pattern calls for a minimum of two servings of Meat/Meat Alternate OR two servings of Grains/Breads OR one of each.

For Meat/Meat Alternate:

- No more than 1 ounce of nuts and/or seeds may be credited in any one meal.
- Dry beans and peas used in items such as a breakfast burrito may count as a Vegetable or Meat Alternate but not as both in the same meal.

Breakfast - Juice/Fruit/Vegetable Requirements:

The meal pattern calls for a minimum of one serving.

- The minimum amount that can count toward meeting the total required servings is 1/8 cup.
- If juice is served to meet the total requirement, it must be full-strength.
- Dry beans and peas used in an item such as a breakfast burrito may count as a Vegetable or as a Meat Alternate, but not as both in the same meal.
- A serving of canned fruit may include the juice or syrup in which the fruit is packed unless otherwise indicated in USDA's *Food Buying Guide for Child Nutrition Programs*.
- A serving of thawed frozen fruit is fruit plus the juice that accumulated during thawing.

NOTE: For lunch, full-strength juice can meet only one-half of the Fruit/Vegetable requirement. But for breakfast, full-strength juice can meet the full requirement.



Counting food items for breakfast...

What food items can be counted as meeting meal pattern requirements for breakfast with Food-Based Menu Planning?

As we've seen earlier with lunch, in the Child Nutrition Programs the word "credit" is used to acknowledge that a particular food meets the requirements of one of the required food components. Only items which contain foods that can be credited as one of the four food items for breakfast can be counted as meeting the meal pattern requirements.

For example, a cereal bar MAY count as one of the food items for breakfast if it contains the required amount of enriched cereal to qualify for a serving of a ready-to-eat breakfast cereal as a Grains/Breads food item.

A 1/4 serving of Grains/Breads is the minimum amount that may be counted toward the required servings.

For more information on crediting of foods, see the Grains/Breads Instruction in Appendix 4. Also see USDA's Food Buying Guide for Child Nutrition Programs.
6. Offer versus Serve for Lunch

Have the goals of Offer versus Serve (OVS) changed as a result of the School Meals Initiative for Healthy Children? Are OVS regulations the same for Traditional and Enhanced Food-Based Menu Planning?

Offer versus Serve (OVS) allows students to decline a certain number of food items in the meal. The original goals of OVS were to minimize plate waste and encourage schools to offer more food choices. These goals have not changed.

Similarly, OVS regulations have not changed for meals planned with Food-Based Menu Planning. The regulations are the same for both Traditional and Enhanced approaches.

Are all schools required to have Offer versus Serve as part of their lunch programs? No. Only senior high schools are required to have OVS for lunch. Local school food authorities can choose whether or not they want to have OVS for their junior high, middle, and elementary schools. For details on how Offer versus Serve works, see page 57 and Appendix 5.



Does OVS accomplish the goals of reducing plate waste and encouraging more food choices?

Many school food service managers say that students do, in fact, consume more food when they are not required to take the full reimbursable meal. The reason, they say, is simple: students like having choices and they are more likely to eat food items they choose themselves.

Because the meal price is the same whether or not they decline some items, many students realize they get more for their money if they take and eat the full reimbursable meal.

Here's how OVS works for lunch with Food-Based Menu Planning:

- Students must be offered all five required items: one serving each of Meat/Meat Alternate, Milk, Grains/Breads; and two servings of Vegetables/Fruits.
- Students have the option of which item(s) to decline.
- Senior high school students are allowed to decline two of the five required food items.
- Students in junior high, middle, and elementary schools may be permitted to decline one or two of the five required food items. Local school food authorities decide whether their students may decline as many as two items, or only one.
- Students are allowed to take smaller portions of the *declined* food items. The required food items taken by the student, however, must each be a full serving.
- Serving sizes must be at least equal to the minimum required quantities by age or grade group.
- The lunch must be priced as a unit. In other words, a student's decision to decline the allowed number of food items (or to accept smaller portions of otherwise declined food items) does not affect the charge for the meal.
- For an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

For Traditional and Enhanced Food-Based Menu Planning, this information is summarized as follows in Appendix 1:

- Required for senior high schools.
- *High school students must take no fewer than three of the required five food items. They get to choose which item(s) to decline.*
- Optional for lower grades. (School food authorities decide whether to have OVS.)

Appendix 5 provides additional information on Offer versus Serve with Food-Based Menu Planning, including how to count items for reimbursable meals.

7. Offer versus Serve for Breakfast

What is the goal of OVS for breakfast? How does it work? Are any schools required to have OVS for breakfast?

The goal of OVS for breakfast is the same as for lunch. However, there are important differences in the way it works. For example, while senior high schools are required to have OVS for their lunch programs, it is optional for breakfast. It is also optional for schools serving younger students.

Here's how it works:

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- Students must be offered all four required food items:
 - One serving of Milk
 - One serving of Juice/Fruit/Vegetable
 - Two servings of Meat/Meat Alternate OR two servings of Grains/Breads OR one serving of each
- The serving sizes must equal the minimum quantities required by age/grade group.
- Students may refuse one food item from any component.
- The breakfast must be priced as a unit. In other words, the charge for the meal is the same whether or not a student chooses to decline a food item.

For an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

For additional information, see Appendix 5.

8. Standardized Recipes

Where can you get standardized recipes for school meals?

Standardized recipes are an important management tool in any food service program. On a daily basis, they help ensure consistent quality and quantity.

In addition, when State agency representatives analyze menus to check for compliance with the nutrition goals, they will need to know which recipes were used and have copies of those recipes. This is easier when standardized recipes have been used.

Standardized recipes and preparation techniques should be used for all menu items that have two or more ingredients or that require any preparation.

The chart in Appendix 1 states the following for Traditional and Enhanced Food-Based Menu Planning:

- A record and copy of recipes used must be available during State nutrition review and analysis.

A source of standardized recipes is the USDA Recipes for Schools (2006)



Shown here are French Toast Strips with Spiced Apple Topping from *the USDA Recipes for Schools* (2006)

9. Processed Foods

When planning to use processed foods, such as brand-name products, will you need to have nutrition information? How can you get this information?

In order to plan meals using Food-Based Menu Planning, you will need to know what a particular product contributes to meal pattern requirements. In addition, in order to plan breakfasts and lunches that meet the appropriate nutrient standards, you will want to know what individual foods contribute to a healthful meal. Reading nutrition labels or information sheets from manufacturers is a good way to start. You will need to have this information on hand for the nutrition assessment done by your State agency.

When you are using processed foods, it is especially important to have nutrition information for particular products. This is because similar items can be very different, even if they have the same name. For example, one manufacturer's ravioli may have twice the amount of saturated fat as another's, and there can be other significant differences, too.

Besides reading product labels, how else can you get the information you need? Even if you have chosen to use Traditional or Enhanced Food-Based Menu Planning instead of Nutrient Standard Menu Planning (NSMP) or Assisted NSMP, you may want to obtain a copy of the USDA-approved NSMP software. Built into this software is the Child Nutrition Database (CN Database).

The CN Database contains files that list food items and nutrients. For example, you will find information on:

- Reference foods commonly used by schools
- USDA commodity foods
- USDA quantity recipes for school food service
- Brand-name processed foods used in schools
- USDA's Food Buying Guide for Child Nutrition Programs

These files are "locked" in order to keep them accurate and reliable. This means you can see and use what is in them but cannot add, delete, or alter any information. You can, however, add local, foods, recipes, and menus to the software.

If you plan to offer a food item but do not find it listed in the CN Database, you can obtain the nutrient analysis from the product's food label or by contacting the manufacturer. You can then enter the information into your software program.

Foods that are included in the reference foods of the CN Database, such as basic condiments, canned vegetables, fruits, etc., can be used without obtaining brand-name analysis.

10. Production Records

Are production records required for Traditional and Enhanced Food-Based Menu Planning?

The chart in Appendix 1 states:

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

Production records are valuable management tools. You will want to keep records of:

- Menus
- Product specifications
- Recipes and preparation methods
- Serving or portion sizes of each planned menu item or condiment for each age/grade grouping
- Planned number of meals by age/grade group for students; number of adult/other meals planned
- Planned number of portions (servings) of each menu or food item to be served; include planned á la carte sales in the planned portions
- Total amount of food actually prepared for each food item or menu item
- Projected production of menu items, including all choices, types of milk, desserts, condiments, and substitutions
- Amount of leftovers for each menu item
- Actual number of reimbursable meals served. Indicate this information for each age/ grade group
- Actual number of non-reimbursable meals (adult meals, second meals served to students)

See Chapter 7 for sample production records.

11. Child Nutrition Labeling

Does the Child Nutrition Labeling Program apply to Traditional and Enhanced Food-Based Menu Planning?

The Child Nutrition (CN) Labeling Program applies to both Traditional and Enhanced Food-Based Menu Planning. This is because CN labels on products show the product's contribution toward meal pattern requirements.

CN Labeling *does not* apply to NSMP or Assisted NSMP because these menu planning approaches do not use meal patterns as planning tools. However, CN-labeled products may be served in meals planned with NSMP or Assisted NSMP.

For more information on CN labeling, see Appendix 6.



CHAPTER 3



Nutrient-Based Menu Planning: NSMP and Assisted NSMP

Chapter 3

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CHAPTER 3



Nutrient-Based Menu Planning: NSMP and Assisted NSMP

n this chapter, we'll take a closer look at Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP). As we did in Chapter 2 for Food-Based Menu Planning, we'll look at the following areas:



- Nutrition Goals
- Nutrient Standards and Age/Grade Groups
- Criteria for a Reimbursable Meal
- Meal Structure for Lunch
- Meal Structure for Breakfast
- Offer versus Serve for Lunch
- Offer versus Serve for Breakfast
- Standardized Recipes
- Processed Foods
- Production Records
- Child Nutrition Labeling

For easy reference, these features are summarized in the chart in Appendix 2. Appendix 1 summarizes these features for Food-Based Menu Planning.

Both NSMP and Assisted NSMP use computerized nutrient analysis of menus as planning tools. When averaged over a school week, this menu analysis must meet the nutrient standards for the specific age/grade groups.

First, an overview...

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As we saw in Chapter 1, NSMP and Assisted NSMP take a Nutrient-Based approach to menu planning. Planning is done with the help of USDA-approved computer software that is specifically programmed to help you put together menus that meet the nutrition goals established by the 1995 *School Meals Initiative for Healthy Children*.

With NSMP, you use the computer software to plan menus and do nutrient analysis. With Assisted NSMP, an outside consultant or other agency (such as the State agency or another school district) does the menu planning and nutrient analysis, based on local preferences.

Unlike Food-Based Menu Planning, NSMP and Assisted NSMP do not use meal patterns with required food components and food items. In fact, there are no required foods *except* fluid milk. Instead of *food components*, planners work with *menu and food items*. This will be explained in more detail later.

Many menu planners using Nutrient-Based Menu Planning like the flexibility it gives them in selecting foods and responding to customer preferences. It may be easier, for example, to provide vegetarian and ethnic selections. This flexibility might make planning within a budget easier, too.

In addition, because the nutrient analysis is done before the menu is served, there is immediate feedback on compliance with the nutrition goals. This can be used for marketing healthy school meals as well as planning them.

1. Nutrition Goals

What are the nutrition goals for Nutrient-Based Menu Planning? How will your menus be reviewed for compliance with them?

Your objective with Nutrient-Based Menu Planning is to plan menus that meet the nutrition goals when averaged over a school week for:

- 1989 Recommended Dietary Allowances (RDA) for key nutrients
- Calories
- 1995 Dietary Guidelines for Americans

Using the USDA-approved computer software, you (or with Assisted NSMP, an outside consultant or agency) plan weekly menus that are measured by nutrient analysis of foods. For review purposes, your State agency will review your nutrient analysis procedure and data entry. This will ensure you are doing nutrient analysis correctly and meeting nutrition goals.

For NSMP and Assisted NSMP, the chart in Appendix 2 states:

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

Menus must be analyzed for nutrient content using USDA-approved software. The nutrient analysis of planned menus must meet nutrient requirements for the age/grade group served when averaged over a week for the nutrient standards based on the 1989 Recommended Dietary Allowances for key nutrients, calories, and 1995 Dietary Guidelines measures.

2. Nutrient Standards and Age/Grade Groups

■ What are the nutrient standards for NSMP and Assisted NSMP? How do nutrient standards relate to age/grade groups with this approach?

As we saw in Chapter 1, nutrient standards are the required levels of calories and key nutrients to meet the nutrition goals set by the 1995 *School Meals Initiative for Healthy Children*. The nutrient standards for healthy school meals were established for all of the menu planning approaches by studying the nutritional needs of groups of children of different ages. There are different nutrient standards for different age/grade groups of children.

What is different with NSMP and Assisted NSMP is *the way you plan meals* to achieve the nutrient standards — and the opportunity to develop customized age groups, if you wish.

How do age/grade groups work with NSMP and Assisted NSMP? Why is there flexibility in targeting meals to children of different ages?

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Looking under "Nutrient Standards and Grade Groups" on the chart in Appendix 2, you will see the following for NSMP and Assisted NSMP:

Minimum of two established age/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.

Optional customized age groups and nutrient standards.

In other words, you have three ways to approach age/grade groups and nutrient standards with NSMP and Assisted NSMP. The approach you select will depend on the needs of your school and your preferences. The USDA-approved computer software includes instructions for each approach and has been programmed to allow you to select the one you prefer.



What are the three ways you can approach age/grade groups and nutrient standards?

1) You can choose to plan by grade groups. For K-12 schools, you will need to use at least the two established groups for lunch and the one established group for breakfast.

For lunches planned with NSMP and Assisted NSMP, the established and optional grade groups are the same as those used with Enhanced Food-Based Menu Planning. In other words:

For K-12 schools, you will need to use a minimum of two established grade groups. One is for Grades K-6. The other is for Grades 7-12.

If you wish, you can also use a third, optional grade group, which USDA recommends but does not require. This is for Grades K-3.

For breakfasts planned with NSMP and Assisted NSMP, there is one established grade group — for Grades K-12. In addition, there is an optional extra grade group — for Grades 7-12. Using this extra group is recommended, but not required.

The charts on pages 69 and 70 show the nutrient standards for lunch and breakfast for these grade groups. As the charts show, there is also a grade group for preschool.

2) You can use a set of established age groups.

Instead of using grade groups, you can plan by age group. This approach might be helpful to you if for some reason your school doesn't have traditional grades. There are four established age groups built into the computer software. They are in years:

- Ages 3-6 Ages 11-13
- Ages 7-10 Ages 14 and older

The charts on pages 71 and 72 show nutrient standards for lunch and breakfast for these age groups.

3) You can develop your own customized age groups. This method allows you to most accurately target the nutrient needs of the children you serve.

Following the instructions in the software, you can develop customized groups to reflect the ages of the children in your school. See page 74 for more information on using customized age groups.

The charts on the next four pages show the minimum requirements for lunches and breakfasts planned with NSMP and Assisted NSMP. In each case, the charts show *school week averages* for:

Calories — also called "Energy Allowances."

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- Five key nutrients protein, calcium, iron, vitamin A, and vitamin C.
- Total fat not to exceed 30 percent of calories over a school week.
- Saturated fat to be less than 10 percent of calories over a school week.

Note that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level. Also keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.



For LUNCHES Planned with NSMP and Assisted NSMP....

If You Are Using Grade Groups, The Nutrient Standards* Are:

Age/Grade Group:	Preschool	Grades K-6	Grades 7-12	Grades K-3 Optional
Energy Allowances (Calories = cal.)	517 cal.	664 cal.	825 cal.	633 cal.
Protein (grams = g)	7 g	10 g	16 g	9 g
Calcium (milligrams = mg)	267 mg	286 mg	400 mg	267 mg
Iron (milligrams = mg)	3.3 mg	3.5 mg	4.5 mg	3.3 mg
Vitamin A (Retinol Equivalents = RE)	150 RE	224 RE	300 RE	200 RE
Vitamin C (milligrams = mg)	14 mg	15 mg	18 mg	15 mg
Total fat	No more than 30 percent of total calories should come from fat.			
aturated fat Less than 10 percent of total calories should come from saturated fat.				

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

For BREAKFASTS Planned with NSMP and Assisted NSMP....

If You Are Using Grade Groups, The Nutrient Standards* Are:

Age/Grade Group:	Preschool	Grades K-12	Grades 7-12 Optional
Energy Allowances (Calories = cal.)	388 cal.	554 cal.	618 cal.
Protein (grams = g)	5 g	10 g	12 g
Calcium (milligrams = mg)	200 mg	257 mg	300 mg
Iron (milligrams = mg)	2.5 mg	3.0 mg	3.4 mg
Vitamin A (Retinol Equivalents = RE)	113 RE	197 RE	225 RE
Vitamin C (milligrams = mg)	11 mg	13 mg	14 mg
Total fat	No more than 30 percent of total calories should come from fat.		lories
Saturated fat	Less than 10 percent of total calories should come from saturated fat.		

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

For LUNCHES Planned with NSMP and Assisted NSMP....

If You Are Using Established Age Groups, The Nutrient Standards* Are:

Age/Grade Group:	Ages 3-6	Ages 7-10	Ages 11-13	Ages 14 and older
Energy Allowances (Calories = cal.)	558 cal.	667 cal.	783 cal.	846 cal.
Protein (grams = g)	7.3 g	9.3 g	15.0 g	16.7 g
Calcium (milligrams = mg)	267 mg	267 mg	400 mg	400 mg
Iron (milligrams = mg)	3.3 mg	3.3 mg	4.5 mg	4.5 mg
Vitamin A (Retinol Equivalents = RE)	158 RE	233 RE	300 RE	300 RE
Vitamin C (milligrams = mg)	14.6 mg	15.0 mg	16.7 mg	19.2 mg
Total fat	No more than 30 percent of total calories should come from fat.			
Saturated fat	Less than 10 percent of total calories should come from saturated fat.			

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

For BREAKFASTS Planned with NSMP and Assisted NSMP....

If You Are Using Established Age Groups, The Nutrient Standards* Are:

Age/Grade Group:	Ages 3-6	Ages 7-10	Ages 11-13	Ages 14 and older
Energy Allowances (Calories = cal.)	419 cal.	500 cal.	588 cal.	625 cal.
Protein (grams = g)	5.50 g	7.00 g	11.25 g	12.50 g
Calcium (milligrams = mg)	200 mg	200 mg	300 mg	300 mg
Iron (milligrams = mg)	2.5 mg	2.5 mg	3.4 mg	3.4 mg
Vitamin A (Retinol Equivalents = RE)	119 RE	175 RE	225 RE	225 RE
Vitamin C (milligrams = mg)	11.00 mg	11.25 mg	12.50 mg	14.40 mg
Total fat	No more than 30 percent of total calories should come from fat.			
Saturated fat	Less than 10 percent of total calories should come from saturated fat.			

Remember these important points: (1) This chart shows minimum school week averages for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and saturated fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge or updated Dietary Guidelines. As they are revised, USDA will notify your State agency.

What if your school's grade structure does not match the established age or grade groups?

As we've seen, an important part of your menu planning will be identifying the grade or age groups you will use. While many schools' grade structures will match the established groups, some will not. If this is true for your schools, you can easily determine how to group grades or ages by following this rule:

- If only one age or grade is outside the established range of K-6 or 7-12... you may use the one age or grade group into which most of the children fit.
- However, if more than one age or grade is outside of the established range... you will need to use two grade or age groups.

Here is an example:

Some food service directors are planning lunches for four schools. The first school has Grades K through 8. The second has Grades 5 through 8. The third has Grades 6 through 9, and the fourth, K through 7.

Knowing that the two established grade groups are K-6 and and 7-12, here is what the planners do and why:

For the Grades K-8 school ...

Grade 7 and Grade 8 are both beyond the K-6 range, so the planners know they cannot use K-6 for all of the children. They decide to use both established grade groups - K-6 and 7-12.

For the Grades 5-8 school...

Here, too, there is more than one grade outside of the established range. Grade 5 is two grades below the Grade 7-12 range. And Grade 8 is two grades above the K-6 range. Once again, the menu planners use both established grade groups — K-6 and 7-12.

For the Grades 6-9 school...

The menu planners use the 7-12 grade group for all of the children. They can do this because Grade 6 is the only grade below the established range of 7-12.

For the Grades K-7 school...

The menu planners use the K-6 grade group. They can do this because Grade 7 is the only grade above the established range of K-6.

What about using customized age groups?

If you choose to use age groups in planning meals with NSMP or Assisted NSMP, you may want to stay with the established age groups. These will already be programmed into any USDA-approved software. As we've seen, there are four established age groups. In years, they are:

- Ages 3-6
- Ages 7-10
- Ages 11-13
- Ages 14 and older

However, since not all school districts are divided into these four age groups, the NSMP software will also allow you to create your own customized age groups. In fact, to most accurately target the nutrient needs of the children you serve, this is the recommended method.

The process involves three main steps. You will:

1) Decide what age groups are appropriate for your school or schools. Keep in mind that you must use at least two age groups with any school that has Grades K-12. Also remember that when there is a wide range of ages and grades, it is recommended that the age group break be right at or above the sixth grade level.

2) Determine the appropriate nutrient standards for these new groups. The computer will do this by weighting, combining, and/or averaging the RDA for different age groups. While this sounds complicated, the software is set up to accomplish this. You will simply enter the age grouping into the computer. The software program will complete the calculations.

3) Incorporate into the software the customized age groups you have developed. Whenever you want to see the nutrient standards for these groups, the computer will figure them out and show them to you.



Why is sixth grade such an important dividing line?

As you can see from the established age and grade groups — as well as from the guidelines for customizing new age groups — sixth grade marks an important dividing line for menu planners.

This is because one of the greatest jumps in children's calorie and nutrient needs occurs between ages 10 and 11 years, which is generally between Grades 5 and 6.

If one grade or age is added on either side of the 10-to-11 age break, there is not too much difference in the RDA requirements for each nutrient. However, when several grades or ages are added on either side of the 10-to-11 age break, either...

- ...too few nutrients and calories will be provided for children age 11 years and older.
- OR -
 - ...too many calories and too much fat will be provided for children age 10 years and younger.

3. Criteria for a Reimbursable Meal

To qualify for reimbursement, what must a lunch include? What must a breakfast include?

Under NSMP and Assisted NSMP, a reimbursable meal must contain a minimum of *three menu items*. This is true for lunch and breakfast; however, as we'll see below, the three menu items are not the same for both meals.

In addition, a reimbursable meal must *meet the nutrient standard* for the appropriate age or grade group when the nutrients in those foods are averaged over a school week. This can be accomplished by following the instructions in the USDA-approved software.

Let's look at how these criteria are summarized in the chart in Appendix 2. The chart states that a reimbursable meal:

- Contains at least three menu items.
- Contains the planned number of menu items in the planned portion sizes to meet the week's nutrient standards.
- Meets the nutrient standards for the appropriate grade or age groups when averaged over 1 school week's menu.

Below and on the next few pages, we'll see what each of these statements means in terms of day-to-day menu planning. Then, later in this chapter, we'll spend more time looking at menu items under "Meal Structure."

The first statement in Appendix 2 under "Criteria for a Reimbursable Meal" reads: *Contains at least three menu items*. Looking at this more closely, we'll want to know: What is a menu item? What are the three menu items a lunch must include? What are the three menu items a breakfast must include?

What is a menu item?

A menu item may be any single food or combination of foods *except*: (1) a condiment *or* (2) a food of minimal nutritional value not included in a menu item.

Condiments include such items as relishes, catsup, mustard, jelly, gravies, and table spreads.

Foods of minimal nutritional value include such things as chewing gum, soda water, water ices, and certain candies. See Appendix 7 for definition under USDA regulations.

There are three *categories* of menu items:

Entrées
Milk
Side Dishes

What menu items must a LUNCH include?

A lunch planned with NSMP or Assisted NSMP must include AT LEAST these *three* menu items plus any planned menu items in the planned portion sizes to meet the week's nutrient standards:

- **1) An entrée.** An entrée is a combination of foods or a single food item offered as the main course. The entrée is the central focus of the meal and forms the framework around which the rest of the meal is planned.
- 2) Fluid milk served as a beverage.
- **3)** A side dish. This can be any other food except a condiment or a food of minimal nutritional value.

What three menu items must a BREAKFAST include?

A breakfast planned with NSMP or Assisted NSMP must include AT LEAST these *three* menu items:

1) Fluid milk served as a beverage or on cereal or both.

- **2)** A side dish. This can be any other food except a condiment or a food of minimal nutritional value.
- **3) Another side dish.** This also can be any other food except a condiment or one of minimal nutritional value.



Now let's look at the third statement in Appendix 2 under "Criteria for a Reimbursable Meal." It reads: *Meets the nutrient standards for the appropriate grade or age groups when averaged over 1 school week's menu.*

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Earlier in this chapter and also in Chapter 1, we looked at nutrient standards and how they relate to age and grade groups. But, what does "over 1 school week's menu" mean in practical terms — for example, what about weeks that are longer or shorter than 5 days? And, what foods count for nutrient analysis? Here are some answers.

How is "school week" defined? What about weeks that are longer or shorter than 5 days?

For NSMP and Assisted NSMP, a school week is defined as a minimum of 3 consecutive days and a maximum of 7 consecutive days. If there are fewer than 3 consecutive days in a week, the days in that week are combined with the coming or prior week for nutrient analysis.

For example, in many areas there are only 2 days of school during Thanksgiving week. Those 2 days could be combined with the week before Thanksgiving, or the week after. The same could be done for other holiday periods or during the first and last weeks of school.

By combining weeks in this way, the menu planner avoids problems in meeting the nutrient standards that can arise out of analyzing a small sample of meals.



What foods count for NUTRIENT ANALYSIS? Are condiments and foods of minimum nutritional value included?

All foods served in a meal, including condiments, are included in the nutrient analysis and count toward meeting the nutrient standards for the meal. (Condiments do not count as required menu items.)

However, foods or menu items that are considered foods of minimal nutritional value under USDA regulations — such as chewing gum, soda water, water ices, and certain candies (see Appendix 7) — can only be included in the nutrient analysis calculations if they are part of a menu item.

It's important to note that *only* foods for *reimbursable* meals are included in the nutrient analysis. Foods for á la carte or adult sales are *not* included in the nutrient analysis. Meals for students with special dietary needs are not included; however, if the only difference between the special dietary needs meal and the regular meal is consistency (pureed), then the meals are included in the nutrient analysis.

4. Meal Structure for Lunch

The chart in Appendix 2 states:

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

- Offer an entrée: an 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.

As we've already seen on page 76, a menu item may be any single food or combination of foods *except* (1) a condiment or (2) a food of minimal nutritional value not included in a menu item. Now let's look at *what* foods count as menu items and *how* you will count menu items that include more than one food.

What foods count as menu items?

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Under NSMP and Assisted NSMP all foods — *except* condiments and foods of minimal nutritional value not served as part of a menu item — count as menu items.

In the example on page 47, we saw that with Food-Based Menu Planning chocolate pudding generally would *not* count as a food item. In contrast, with NSMP and Assisted NSMP, chocolate pudding would count as a menu item (but not as a substitute for fluid milk served as a beverage).

How do you count foods like a hamburger with a bun? Is this one menu item or two?

This depends on how it is *served*. If a menu item includes two (or more) foods but is served as *one* dish, it is considered *one* menu item because students cannot choose to take some of the foods without the others.

On the other hand, if those same two foods are served in a manner that allows students to choose each separately, they are considered *two* menu items.

As the menu planner at the local level, *you* determine how food items are served and, therefore, how menu items are counted. For example:

If you serve "Hamburger on a Bun"...

... and the student does <u>not</u> have the choice of taking either the hamburger or the bun separately...

this counts as ONE menu item.

If you serve "Hamburger Patty" and "Bun"...

... and the student can choose one or the other or both...

this counts as TWO menu items.

Both of these options are shown in the screened box on the next page, along with two other examples.

One menu item or two? It depends on you...

You are planning lunch with NSMP. Will the foods you have chosen count as one menu item or two? How you serve them is the deciding factor.

In the examples below, foods are listed in two columns. The first column shows foods that will be served together as a unit. These will count as one menu item because students cannot choose to take only some of the foods.

The second column shows foods that will be offered in the same meal, but this time students *can* select them separately. In this case, the foods will count as two menu items.



One Menu Item	Two Menu Items		
Hamburger on a Bun	Hamburger Patty Bun		
Turkey and Gravy on Mashed Potatoes	Turkey and Gravy Mashed Potatoes		
Burrito Grande (Tortilla, Beans, Rice, Tomato, Lettuce, Salsa)	Bean Burrito Spanish Rice		

As you think about how you will serve and count menu items, remember that the real test of your menu planning is the nutrient analysis averaged over a week. This analysis will tell you if you are reaching the required nutrient and calorie standards.

5. Meal Structure for Breakfast

The chart in Appendix 2 states:

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.
- Plus any additional planned menu items in the planned portion sizes needed to meet the week's nutrient standards.

For information on how to count menu items, see page 80.

COMPARING BREAKFAST AND LUNCH:

For NSMP and Assisted NSMP, Minimum Required Menu Items Are...

Three Menu Items for BREAKFAST...

One... Fluid milk served as a beverage or on cereal or both

Two and three...

Any two other foods except (1) a condiment or (2) a food of minimal nutritional value that is not part of a menu item Three Menu Items for LUNCH...

One... Fluid milk served as a beverage

Two... An entrée

Three...Any other food except (1) a condiment or (2) a food of minimal nutritional value that is not part of a menu item

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What about salad bars and other theme bars?

In many schools, theme bars are popular with students. Offerings range from salads, to pasta, tacos, potatoes — and more. Some schools serve complete lunches or breakfasts this way. Others offer only side dishes. Just as theme bars work well with Food-Based Menu Planning, they also work well with Nutrient-Based Menu Planning.

Schools using NSMP and Assisted NSMP may serve lunch this way if it consists at a minimum: (1) an entrée; (2) fluid milk served as a beverage; and (3) one other menu item. Schools may serve breakfast this way as long as it contains at minimum fluid milk and two other menu items.

Condiments and foods of minimal nutritional value do not count as menu items. For nutrient analysis, however, you will include condiments and foods of minimal nutritional value that are part of menu items.





6. Offer versus Serve (OVS) for Lunch

How does Offer versus Serve (OVS) work for lunch with NSMP and Assisted NSMP? Are the goals of OVS still the same?

With NSMP and Assisted NSMP, OVS works as follows for lunch:

- 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.)

For an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

Senior high schools are required to have OVS for lunch. Local school food authorities can choose whether or not they want to have OVS for their junior high, middle, and elementary schools.

The goals of OVS are the same as they have always been — to minimize plate waste and encourage schools to offer more food choices. For more information on the benefits of OVS, see page 56. For more information on OVS and Nutrient-Based Menu Planning, see Appendix 5 and the *Offer versus Serve* publication and video from Team Nutrition. (Go to *teamnutrition.usda.gov* to view this publication online.

7. Offer versus Serve (OVS) for Breakfast

What is the goal of OVS for breakfast with NSMP and Assisted NSMP? How does OVS work for breakfast?

The goal of OVS for breakfast is the same as for lunch. OVS at breakfast is optional at all grade levels. *Here's how it works*: Students may decline a maximum of one menu item out of the three or more required menu items offered.

As we noted above, for an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

Determining a reimbursable OVS lunch:

Below are two menus. For each, there is a list of possible reimbursable meals, along with the reasons why these meals would qualify as OVS lunches with NSMP and Assisted NSMP.

• MENU #1

For these menu items...

Taco Salad Watermelon Wedge Choice of Milk

- The possible reimbursable meals are...
- 1. Taco Salad, Watermelon Wedge, Milk
- 2. Taco Salad and Watermelon Wedge
- 3. Taco Salad and Milk

The rationale is...

- 1. Students must take an entrée.
- Students may decline only one menu item when the minimum of three menu items are offered as a meal unit.

• MENU #2

For these menu items...

Taco Refried Beans Rice Watermelon Wedge Choice of Milk

There are many possible reimbursable meals. Here are some of them:

- 1. Taco, Refried Beans, Rice
- 2. Taco, Rice, Watermelon Wedge
- 3. Taco, Watermelon Wedge, Milk
- 4. Taco, Refried Beans, Watermelon Wedge
- 5. Taco, Refried Beans, Milk
- 6. Taco, Rice, Milk

The rationale is...

- 1. Students must take an entrée.
- 2. Students may decline no more than two menu items if more than three are offered as a meal unit.

8. Standardized Recipes

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Are standardized recipes required with NSMP and Assisted NSMP? Where can you get standardized recipes for school meals?

Standardized recipes are an important management tool in any food service program. They are highly recommended for all menu planning approaches, and they *are required* for NSMP and Assisted NSMP.

Standardized recipes help ensure that the correct portion size is served to all students. In addition, when State agency representatives analyze the menus to check for compliance with the nutrition goals, they will need to know which recipes were used and have copies of those recipes.

Standardized recipes and preparation techniques should be used for all menu items that have two or more ingredients or that require any preparation.

A source of standardized recipes is the USDA Recipes for Schools (2006)



Shown here is Chicken Stir-Fry from the USDA Recipes for Schools (2006). See Appendix 3 for more information.

9. Processed Foods

When using processed foods, such as brand-name products, how will you get the information you need for nutrient analysis?

When you are using processed foods, it's important to have nutrition information for the products you are using. While one manufacturer's product may have the same name as another's, the ingredients can vary greatly.

For example, two different manufacturers may offer a vegetarian chili, but it is unlikely both will use the same ingredients in identical proportions. One may put in twice as many kidney beans, for instance, or maybe only half as many tomatoes. One producer's chili may have more fat than another's. As a result, the nutrient content of the two products will be very different.

How will you get the information you need?

In many instances, this information will already be programmed into the USDA-approved software as part of the Child Nutrition Database (CN Database). The CN Database contains files that list food items and nutrients. You will find information on:

- Reference foods commonly used by schools
- USDA commodity foods
- USDA Recipes for Schools (2006)
- Brand-name processed foods used in schools
- USDA's Food Buying Guide for Child Nutrition Programs

These files are "locked" in order to keep them accurate and reliable. This means you can see and use what is in them but cannot add, delete, or alter information.

You can, however, add additional files to the software. If you plan to offer a food item but do not find it listed in the CN Database, you will need to obtain the nutrient analysis from the product's food label or by contacting the manufacturer, then enter the information into your software program.

Foods that are included in the reference foods of the CN Database, such as basic condiments, canned vegetables, fruits, etc., can be used without obtaining brand-name analysis.

10. Production Records

Are production records required for NSMP and Assisted NSMP?

Yes, program regulations require schools to keep food production and menu records. For example, you will need to keep records of:

- Menus
- Product specifications
- Recipes and preparation methods
- Serving or portion sizes of each planned menu item or condiment for each age/grade grouping
- Planned number of meals by age/grade group for students; number of adult/other meals planned
- Planned number of portions (servings) of each menu or food item to be served; include planned á la carte sales in the planned portions
- Total amount of food actually prepared for each food item or menu item
- Projected production of menu items, including all choices, types of milk, desserts, condiments, and substitutions
- Amount of leftovers for each menu item
- Actual number of reimbursable meals served for each age/grade group
- Actual number of non-reimbursable meals (adult meals, second meals served to students).

See Chapter 7 for sample production records.

11. Child Nutrition Labeling

Does the Child Nutrition Labeling Program apply to NSMP and Assisted NSMP?

CN labels on products show the product's contribution toward meal pattern requirements. Because NSMP and Assisted NSMP do not use meal patterns as planning tools, CN Labeling does not apply to these menu planning approaches. However, schools can <u>serve</u> CN-labeled products in meals planned with NSMP and Assisted NSMP.

The CN-labeled product may already be in the Child Nutrition Database that is part of the USDA-approved software. If the CN-labeled product is not in the Child Nutrition Database, you can enter into your local database the nutrient information you have obtained from the product's label or from the manufacturer.

For more information on CN labeling as used with Traditional and Enhanced Food-Based Menu Planning, see Appendix 6.

CHAPTER 4



The ABC's of Successful Menu Planning
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CHAPTER 4



The ABC's of Successful Menu Planning

H ow important is menu planning? In a successfully managed school lunch or breakfast program, it may be the *most* crucial step. The nutritional value of meals and compliance with federal program requirements depend on careful menu planning. But that's not all.

The menu influences almost *every* aspect of the food service operation — from what foods are purchased and how they are prepared, to whether or not meals are popular with students. Good planning can make a huge difference!

In this chapter, we'll look at the ABC's of successfully planning appealing school meals. We'll review the menu planning process and some important planning principles. We'll also explore ways to use the 2005 Dietary Guidelines for Americans and the nutrient standards for healthy school meals as planning tools.

Planning menus involves much more than listing specific foods for daily meals. A menu planning worksheet can be helpful in organizing the total job. You will find sample worksheets and sample menus at the end of this chapter.









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No matter which menu planning approach you select — Traditional or Enhanced Food-Based, NSMP or Assisted NSMP — you will proceed through several logical steps. In the next few pages, we'll look at these steps. Where appropriate we'll add extra details, first for Food-Based Menu Planning, then for Nutrient-Based Menu Planning. The ten steps are:

- **1.** Schedule a time to plan menus. Collect menu resources.
- 2. THINK ABOUT WHERE YOU ARE AND WHERE YOU WANT TO GO.
- **3. D**ETERMINE A TIME PERIOD.

- **4.** Focus on the age or grade group(s) you will serve.
- 5. DECIDE THE NUMBER OF CHOICES YOU WILL OFFER.
- 6. SELECT THE ENTRÉE FOR EACH DAY'S BREAKFAST AND LUNCH.
- 7. SELECT THE OTHER MENU ITEM OR ITEMS.
- 8. Provide fluid milk choices.
- 9. Make sure you are meeting nutrition goals.
- **10.** Evaluate what you have planned.

STEP Schedule a time to plan menus. Collect menu resources.

Plan menus well in advance, preferably a month or more ahead of the time they are to be served. Depending on your role in menu planning, you will want to have time to:

- (1) Study food inventories, current market and price reports, previous menus, and food production records that indicate student preferences.
- (2) Involve students, parents, and other interested parties in the planning.
- (3) Select and test food products and recipes.
- (4) Plan and check the resulting menus.

To be prepared, you will want to pull together a variety of menu resources. These might include, for example, past successful menus, recipe files, and food trade journals. For easy reference, also have on hand copies of food production and inventory records, as well as sales histories, and publications such as USDA's *Food Buying Guide for Child Nutrition Programs, USDA Recipes for Schools (2006), Choice Plus, and Fruits and Vegetables Galore: Helping Kids Eat More.* These publications are available for order or download from the Resource Library on the Team Nutrition web site at *teamnutrition.usda.gov.* (See Appendix 3 for more information on these publications.)

In addition, you will want to review important program information, such as requirements, nutrition goals, and lists of available USDA commodities. Also, note important dates on the school calendar and other opportunities for special promotions.



THINK ABOUT WHERE YOU ARE AND WHERE YOU WANT TO GO.

An important next step is to take time to re-examine your current approach. Review your menus, the products you purchase, and preparation techniques. Will they work in any new menu planning system you may be considering? With the Dietary Guidelines and students' nutrition needs and preferences in mind, take another look at what you have been serving. Which areas are okay? Which need modifying?

- Are you planning sufficient variety?
- Do you need more servings of grains/breads? Have you included some whole grain food items?
- Can you serve more vegetables/fruits?
- Have you included vegetables from all five subgroups (dark green, orange, legumes, starchy vegetables, and other vegetables) several times a week?
- How often do you serve low-fat entrées?
- Do you need to add foods or increase servings to provide more calories?
- Do you need to serve some foods less often?

STEP 3

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STEP DETERMINE A TIME PERIOD.

For each of the menu planning approaches, there are weekly nutrient requirements and nutrition goals *so be sure to plan menus by the week*. Weekly nutrient requirements are based on the normal school week of 5 consecutive days. They are adjusted accordingly if the school week is longer or shorter than 5 days.

In addition, you may want to select a time frame for a cycle menu. Cycle menus are menus planned for a longer time period and repeated on a regular basis. A cycle can be any number of weeks that works for <u>your</u> operation. See the screened box below for more information on cycle menus.

MAKING THE MOST OF CYCLE MENUS

If carefully planned, cycle menus can offer a number of advantages. They can...

- Save time in repetitive functions such as precosting and work schedules.
- Adapt easily to varied grades and ages.
- Allow flexibility for such things as seasonal changes, availability of commodity foods, and special events.
- Allow more time for training and marketing.

Plan with your schools' needs in mind. You may want to have a seasonal cycle, for example, or a holiday cycle based on school celebrations.

To use cycle menus to best advantage, be careful to avoid the potential pitfalls. Here are some tips:

- To avoid having cycle menus become monotonous and repetitious, plan carefully and evaluate continually.
- So that holidays and special school activities won't go unrecognized, be sure to note them on the calendar well in advance. Designate specific dates when a special menu is to be substituted for the one in the cycle.
- To make the best use of foods in season, be flexible. Use general descriptive terms — for example, indicate "fresh fruit" rather than "apples." Or, plan one cycle for each season: Fall (September, October, November); Winter (December, January, February); and Spring (March, April, May).
- Be ready to make adjustments. For example, if you receive USDA-donated foods you may want to make changes in order to include them.

Flexibility is the key! Review menus frequently to make adjustments for changes in availability of USDA-donated foods; to take advantage of an especially good buy or a seasonal food; and to allow for a special occasion. It's a good idea to keep a small inventory of substitute items to use in the event of an emergency or a changing situation.



FOCUS ON THE AGE OR GRADE GROUPS YOU WILL SERVE.

Although Food-Based and Nutrient-Based Menu Planning differ in many respects, the starting point for both is focusing on the ages or grades of the students you will serve.

To review how to select and use age/grade groups for Food-Based Menu Planning (Traditional and Enhanced), turn back to Chapter 2. For Nutrient-Based Menu Planning (NSMP and Assisted NSMP), see Chapter 3.

step 5

DECIDE THE NUMBER OF CHOICES YOU WILL OFFER.

The number of choices you offer will depend on your operation. However, keep in mind that the variety offered does not affect *minimum requirements*. See Chapter 2 for minimum requirements for Traditional and Enhanced Food-Based Menu Planning; see Chapter 3 for NSMP and Assisted NSMP.

In making your decision, try to balance cost, nutrients, equipment used, and labor needed to prepare each of the choices. Start by adding one or more entrées, then add a selection of side dishes that go with the entrée choices. This method works for any of the menu planning approaches.

Offering choices allows you to add new foods without risking a drop in participation. Remember that it often takes several opportunities for students to try foods before they learn to like them.



SELECT THE ENTRÉE FOR EACH DAY'S BREAKFAST AND LUNCH.

Remember that the entrée sets the stage for the rest of the lunch menu and sometimes for the breakfast menu. It may determine whether students decide to eat that day.

Entrées should be selected first in menu planning because they are the central focus of a meal. They form the framework around which you will plan the rest of the menu.

If you are using NSMP or Assisted NSMP, you will find you have a different kind of flexibility than you had when working with meal patterns. This is because you are no longer serving specific food components in specific amounts. While this flexibility can help you make meals interesting and appealing, it is important to continue to use good menu planning practices.

Be careful when selecting entrées:

- (1) If you include an entrée that is not central to the meal or is not recognized by students as the entrée, this could result in poor acceptance.
- (2) Follow a plan for providing a *variety* of entrées.
- (3) If you do not have entrée choices and you repeat the same entrée during a 2-week period, consider varying the other foods served with it.

STEP 7

SELECT THE OTHER MENU ITEM OR ITEMS.

You will want to include menu items that complement the entrée. Plan to use plenty of vegetables, fruits, and whole grains. Keep in mind that students like many vegetables raw as well as cooked. Try to introduce new foods, starting with small amounts.

STEP 8

PROVIDE FLUID MILK CHOICES.

Plan to make a variety of milk options available every day. Remember that offering low-fat or fat-free milk is a good way to reduce fat and be consistent with the Dietary Guidelines. (See Appendix 8 for information on milk requirements and the labeling of fat-free and low-fat milk.)

Schools are required to offer a variety of milk choices consistent with students' preferences in the prior year. If a specific type of milk represents less than 1 percent of the total amount of milk consumed in the prior year, the school may elect not to offer that type of milk for lunch.

LOWER FAT MILK CHOICES CAN MAKE A BIG DIFFERENCE

Offering lower fat milk choices is an easy way to reduce total fat and saturated fat. Here's an example:

A menu planner decides to offer the following items for lunch:	With WHOLE milk	With 2%-fat milk
- Breaded Chicken on a Roll with Lettuce and Tomato	34% of calories will come from fat	32% of calories will come from fat
- Potato Wedges - Cherry Cobbler - Milk	11% of calories will come from saturated fat	9% of calories will come from saturated fat
	With 1%-fat milk	With fat-free milk
	31% of calories will come from fat	29% of calories will come from fat

8% of calories will come from saturated fat

7% of calories will come from saturated fat

In this example, offering fat-free milk instead of whole milk will reduce calories from fat by 5% and calories from saturated fat by 4%.



MAKE SURE YOU ARE MEETING NUTRITION GOALS.

As you think about meals that will appeal to your student customers, keep the nutrition goals in mind. Looking at your menus, ask yourself questions like the following:

Do our meals provide students with adequate calories and nutrients while limiting fat, saturated fat, *trans* fat, cholesterol, sodium and added sugars?

What kind of example do our meals set for students? Are they consistent with the recommendations of the Dietary Guidelines? Do they encourage students to eat foods from every food group?

Do the menus emphasize whole grains and a varity of fruits and vegetables?

Will the foods on the menu appeal to students and taste good?

See Chapters 6 and 8 for tips on preparing and marketing healthful meals.

STEP **10**

EVALUATE WHAT YOU HAVE PLANNED.

Before you decide to wrap up a planning session, look over what you have planned. Will your meals meet your goals for nutritional value? For variety and customer appeal? What about cost?

Will you be serving breakfast as well as lunch? Does your lunch menu repeat any of the foods you have selected for breakfast? How does what you have planned for breakfast affect equipment and staffing needs for lunch?

Do your meals comply with the requirements of the National School Lunch and School Breakfast Programs? By meeting these requirements, you are making sure your meals will qualify for the appropriate federal reimbursement.

As you know, your State agency periodically reviews your meals to make sure they are consistent with program requirements. How you evaluate your meals — and how the State agency will do its review — will depend on which menu planning approach you have selected.

What about special needs? School meal regulations require you to make substitutions for individual children with a physician's prescription for dietary accommodations due to a disability. You may also make substitutions for children with medical or other special dietary needs who do not have a disability. Exceptions must be supported by a statement from a recognized medical authority and must include recommended substitute foods. Be sure to keep this statement on file in the school. For more information, contact your State agency.



Pictured here is Beef Stir-Fry, one of many exciting entrées included in *USDA Recipes for Schools (2006)* See Appendix 3 for more information.

BASIC MENU PLANNING PRINCIPLES

Across the country, schools are offering meals in a variety of interesting forms — from simple boxed lunches to many-item buffets. Just as school lunches and breakfasts come in many forms, so do the foods that go into them.

Advances in food technology make it possible to select foods in many forms — frozen or chilled, partially or totally prepared, pre-portioned or in bulk, pre-prepared or as ingredients to put together "from scratch."

All of this makes menu planning exciting as well as challenging. Where do you begin? The basic menu planning principles listed below and discussed on the following pages are a good starting point. Keep them in mind as you think about your customers' preferences and nutrition needs.

Strive for balance.
 Emphasize variety.

3. Offer choices.

4. Add contrast.

5. Think about color.

6. Consider eye appeal.

1. Strive for balance.

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As you work to plan meals that are nourishing, appealing, and taste good, you will want to strive for balance in a number of different ways. Select and combine foods in ways that...

- ... help you meet the required nutrient standards. For example, as you work to achieve calorie goals and target fat levels, look for ways to balance higher fat foods with items that are lower in fat.
- ... balance flavors in appealing ways. Make sure individual foods, when served together, make a winning combination. Too many strongly flavored foods may make a meal unacceptable to children. Too many mild flavors may make it too bland.
- ... balance color, texture, size. Be sure your meals have pleasing, eye-appealing combinations of foods. To add interest, see suggestions listed under contrast and eye appeal on pages 100 and 101.

Here are some tips for achieving balance:

Balance higher fat foods with ones that have less fat. For starters, avoid having too many higher fat foods in the same week. In other words, don't include pepperoni pizza on a week's menu if you are already planning to offer hot dogs and chicken nuggets.

In addition, balance a higher fat entrée with low-fat entrées. For example, when you are offering a cheeseburger, also offer a turkey sandwich.

And look for ways to use low-fat side dishes to balance a higher fat entrée. For example, with a grilled cheese sandwich, offer carrot and celery sticks.

Use a combination of mild and strong flavors. While some students enjoy strongly flavored foods, be careful not to serve too many in the same meal. For example, a meal with pepperoni pizza, cajun potatoes, coleslaw, and a brownie has too many spicy and strong flavors.

Use a variety of shapes and sizes. To make a menu interesting, include different shapes and sizes. If you serve fish sticks, oven-baked French fries, carrot sticks, and a banana, you have several similarly shaped foods. A meal with more varied shapes might feature: a baked chicken leg, mashed potatoes with low-fat gravy, seasoned green beans, and a watermelon wedge.

2. Emphasize variety.

Serving a variety of foods is important because no one food or group of foods can give us everything we need for a healthy diet. Variety also makes menus interesting and appealing. To add variety in school meals, try to...

- ... Include a wide variety of foods from day to day. Unless you provide choices, avoid planning the same form of food on consecutive days, such as meatballs with spaghetti on Monday and meat ravioli on Tuesday.
- ... Vary the types of main courses you serve. For example, serve casseroles one day, soup and sandwiches the next, or perhaps a main-dish salad.
- ... Include different forms of foods, and prepare them in a variety of ways. For instance, some vegetables are good eaten raw. If you usually serve a particular vegetable cooked, serve it uncooked if it is good that way. Or cook it but use different sauces or seasonings. In any case, be sure the "different way" of serving is as appealing as the "usual way."
- ... Include a surprise item or a small amount of a new or unfamiliar food periodically. For example, try adding raw cauliflower, red cabbage, or spinach to a salad.

3. Offer choices.

Any school food service program, regardless of size, can offer choices in the menu. Try the following...

- ... Decide on the number of choices you can offer in each category of food, and plan menus accordingly. With careful planning and efficient management, offering choices need not increase your operating costs.
- ... Offer choices within as many components as you can. For example, offer two entrées and let students select one. Offer three or more fruits and vegetables and let students choose two. Offer two or more grains/breads and let students choose one or two. Offer a variety of milk choices and let students choose one.
- ... Include the food combinations most acceptable to students in your school. The lower the acceptability of the menu item, the less frequently you should offer it.

4. Add contrast.

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Strive for contrasts of texture, flavor, and methods of preparation.

- ... Think about the texture of foods as well as their taste and appearance. For added appeal, serve a green salad or raw vegetable with spaghetti. Offer a crisp fruit or vegetable with a burrito, and crisp steamed carrots and broccoli with meatloaf. Pair toasted garlic bread and cold broccoli salad with cheese ravioli.
- ... Use some crisp, firm foods with soft creamy ones. A green salad, raw vegetable sticks, or a hard roll could provide crispness to a meal with macaroni and cheese.
- ... Avoid having too much of the same type of food in the same meal. A lunch with too many starches or too many sweets lacks contrast as well as balance. So does a meal with too many heavy foods. If you are serving a hearty casserole, plan to offer a light vegetable or light dessert such as fresh fruit.
- ... Use a pleasing combination of different sizes and shapes of foods. Within a meal, present foods in several different shapes, such as cubes, mounds, shredded bits, and strips. A meal with cubed meat, diced potatoes, mixed vegetables, and fruit cocktail needs more contrast in size and shapes of foods.

5. Think about color.

Use combinations of colors that go together well, and strive for contrast and maximum color presentation. A good rule of thumb is to use at least two colorful foods in each menu for visual appeal. In addition...

- ... Avoid using too many foods of the same color in the same meal. A meal with turkey, rice, cauliflower, white bread, and pears would lack color contrast. A better combination would be turkey and cranberry sauce, green peas, whole wheat bread, and pears.
- ... Remember that vegetables and fruits are great for adding natural color to side dishes as well as entrées. A slice of tomato really brightens up a potato salad. A fresh grape or strawberry livens up a dish of diced pears or peaches.
- ... Use colorful foods in combination with those that have little or no color. Serve broccoli spears with whipped potatoes, for example. Add pimento or green pepper to corn. Offer a bright red apple and green lettuce with a hamburger and baked beans. Serve green peas and apricots with oven fried chicken and mashed potatoes.
- ... And don't forget spices. It's easy to sprinkle on a dash of cinnamon or paprika for added color.



6. Consider eye appeal.

Your customers' first impression will be how a meal looks. Make sure what you serve looks good as well as tastes good.

- ... Think of the total presentation. As you plan for color, consider the color of the dishes, plates, or trays to be used as well as the colors of the foods.
- ... Make the serving line attractive. Try to add color and texture to the serving line. Where possible, garnish food in steamtable pans. For example, add a few red or green pepper rings to a pan of macaroni and cheese. Put parsley, a tomato wedge, or a piece of brightly colored fruit on a tray of sandwiches. Put a bit of paprika or some lemon slices on a pan of steamed rice.
- ... Plan the way you will place the menu items on the tray or plate. Visualize how the food will look when served and decide on the most attractive arrangement. Before serving the lunch, portion a sample plate so that all servers can see how it should look. This is also a good way to show them correct serving sizes.

Keep in mind special considerations:

As you apply the basic menu planning principles, keep in mind special considerations such as: regional food preferences, holidays and other special occasions, climate and seasons, and product availability.

Food preferences: Consider the regional, cultural, and personal food preferences of the students you serve, but don't be afraid to introduce new foods from time to time. Include new foods as choices and encourage students to try them. Be sure menus don't reflect your personal food prejudices.

Holidays and special occasions: Plan festive lunches and breakfasts for national holidays, school events, and special occasions like parents' visiting days. Don't forget National School Lunch Week, School Breakfast Week, and National Nutrition Month!

Climate or seasons: Include more hot foods in cold weather, and more cold foods in warm weather.

Product availability: Use foods in season. Plan to serve plenty of fresh fruits and vegetables when they are plentiful and at the peak of quality.

Consider available staff and equipment:

You will want to plan meals you can prepare and serve with available facilities, equipment, and staff. Here are some tips:

When thinking about facilities and equipment:

Consider the kind and size of ovens, kettles, steamers, and other equipment; also think about freezer and refrigeration space.

Consider sheet and baking pans, steamtable inserts, and other equipment used in meal preparation.

Consider the numbers and kinds of serving tools and dishes or compartments in a compartment tray needed to serve each meal.

When thinking about available staff:

Plan lunches and breakfasts employees can prepare in the time available.

Consider the amount of hand preparation required for each menu.

Schedule employees' time so their particular skills can be used to best advantage.

Balance the workload - food preparation and clean-up - from day to day and from week to week.

If you also order or purchase food:

In some school districts, menu planners are also responsible for ordering and purchasing food. If this is part of your job, you may find the following tips helpful.

Consider the availability of foods from local suppliers. If you need to reduce the number of deliveries, you can plan menus that include fresh produce on consecutive days. Do the same for commercially baked breads.

Operate within a budget, and precost your menu. Keep records of the approximate cost per serving of each menu item in order to determine what each lunch will cost as well as the average lunch cost per month. You can make substitutions if the average cost of the menu runs too high.

Postcost menus and compare with precost. Use this information to make menu adjustments and pinpoint possible problem areas.

Keep abreast of price trends and the market availability of various foods. Identify extremes — items which are very high priced or those which are very low priced — with a view to minimizing and maximizing, respectively, their use in the menu.

Use USDA-donated foods when available. Use them as efficiently and creatively as you would if you had purchased the food.

Keep records of food purchased, used, and available in inventories. Also keep customer participation records and production records that note acceptability.

Tips on purchasing quality foods:

Foods you serve can only be as good as the quality of the foods you purchase. Careful use of competitive buying will not only help control food costs but will also help upgrade the quality of your meals. Here are some additional tips...

Be familiar with sources of supply. Buy from suppliers who provide the best quality food at the most reasonable prices. Seek out potential new suppliers. Put them on your mailing list for bids and requests for proposals. Also look for opportunities to buy through cooperative purchasing groups (co-ops).

Buy according to how you will use a product. Consider grade, style, type, size, count, container, and packing medium.

Develop clear, concise purchase specifications and food product descriptions. To ensure the purchase of quality foods at competitive prices, write specifications and descriptions that will make clear what you want and what you will accept. The following publications may be helpful: *First Choice* and *Choice Plus*. For more information, see Appendix 3.

Inspect upon delivery. Make sure what is delivered meets your specifications. Whenever possible, buy foods that are federally graded and inspected.

Remember storage facilities. Decide when to buy each type of food, keeping in mind perishability and storage space.

Keep records of food purchases.

For commercially prepared foods, determine the quantities of foods needed and portion sizes according to the age/grade group to be served. Be sure the purchase specifications include that information.

PUTTING THE DIETARY GUIDELINES TO WORK FOR YOU ...

Applying the advice contained in the Dietary Guidelines for Americans is the best place to start when planning healthy school meals. As mentioned earlier, the current nutrition goals are based on the 1995 Dietary Guidelines, however information on the Dietary Guidelines for Americans 2005 is provided so that schools can begin to work towards these new goals.

This part of Chapter 4 offers practical tips for putting the Dietary Guidelines to work. We'll look at breakfast first, then lunch. Before beginning this section, you may want to re-read the background on the Dietary Guidelines contained in Chapter 1.

As we saw in Chapter 1, the Dietary Guidelines call for getting the most nutrition out of your calories and finding your balance between food and physical activity. They also stress the importance of making smart choices from every food group because no one food or group of foods can give us everything we need for a healthy diet.

It's important to remember that a healthy diet applies to a pattern of foods consumed over several days, not to single meals or foods. In fact, even foods of lower nutritional value can be part of a healthy diet when served in moderation, but menu planners should monitor the amount of these foods and how often they are served.

Serving meals that reflect the Dietary Guidelines is a great way to show children what it means to eat for good health!

What do the Dietary Guidelines recommend?

As described in Chapter 1, the 2005 Dietary Guidelines for Americans recommend:

- Make smart choices from every food group—meat and meat alternates, grains/ breads, vegetables, fruits, and milk and milk products.
- Find your balance between food and physical activity and get the most nutrition out of your calories.
- Know the limits for fats, sugar, and sodium, and how to use the Nutrition Facts Label.

Putting the Dietary Guidelines to Work ...

WHEN PLANNING SCHOOL MEALS

Here are some tips for applying the Dietary Guidelines for Americans as you plan healthy school meals. We'll look at three Guidelines in detail. For each of these, you will find a variety of suggestions. You probably have many ideas of your own to add to these!

For easy reference, foods are listed by the components used with Food-Based Menu Planning, such as "Meat/Meat Alternate." However, schools using Nutrient-Based Menu Planning Approaches will also find these tips helpful.

Make smart choices from every food group

As you plan school meals for children, keep in mind that it's important to obtain nutrients from foods from every food group, not from a few highly fortified foods or supplements. This is because:

- Just as children need nutrients for growth and health, they also need energy. Offering foods from every food group is the best way to provide children with adequate calories as well as nutrients. A good breakfast provides energy to start the day and has been linked to improved behavior and better performance in the classroom. Lunch provides energy through the afternoon.
- Relying on fortified foods or supplements may limit the nutrients in meals served to children.
- There are some nutrients for which requirements and functions have not yet been established, even though our bodies need and use them. A varied diet will help avoid shortages of these nutrients as well as others.

Overall:

Offer a variety of vegetables, fruits, lean meats, milk and milk products, and grains (especially whole grains) with little saturated fat, trans fat, cholesterol or added sugar. Offer a variety of whole-grain breads, cereals, pasta and rice with little added saturated fat and *trans* fat and a moderate or low amount of added sugars. When possible, use low-fat forms of foods in each group with little or no added sugars.

Go lean with protein.

Meat or Meat Alternates

- Plan a different meat or meat alternate or a different combination of meat or meat alternates for each day in the week. Follow a plan for providing a good variety of meats and meat alternates in breakfast dishes and lunch entrées. Vary your protein choices—with more fish, beans, peas, nuts, and seeds.
- Offer lean turkey, roast beef, ham, or low-fat luncheon meats.
- Bake it, broil it, or grill it- use these methods instead of frying to reduce fat.

- Serve extra lean beef and pork and trim or drain any excess fat.
- Skip or limit the breading on meat, poultry, or fish.
- Offer dry beans, peas, egg substitute, or nuts as an alternative to vegetarians or those avoiding meat products.
- Add a tablespoon of reduced-fat peanut butter to sliced apple or celery.
- Include kidney beans and chickpeas (garbanzo beans) on salad bars.
- Provide nuts on salads, or in main dishes.

Make half your grains whole

Grains and Breads

- Plan to use a different kind of enriched or whole-grain bread or cereal each day. Serve a variety of whole-grain cereals, such as toasted oats for a quick and easy breakfast. For lunch, include a variety of enriched or whole-grain macaroni, noodles, and other pasta products. For example, offer a variety of hot and cold whole-grain pasta salads.
- Whole grains cannot be identified by the color of the food. Read ingredient lists on foods and look for the word "whole" next to the grain name. For example, look for one of the following ingredients first on the label ingredient list: whole wheat, whole oats, whole rye, brown rice, oatmeal, whole-grain corn, graham flour, or cracked wheat.
- Read the Nutrition Facts Label on foods so you can choose grain products that are high in fiber and low in saturated fat and sodium.
- Buy or make low-fat quick breads, muffins, crackers, cookies, or pancakes with a high percentage of whole grains or whole-grain flours.
- Offer school-made whole-grain loaf breads or hot breads, such as rolls, sandwich buns, muffins, biscuits, or cornbread as often as possible. Look for more opportunities to use whole grains in your recipes and menus.
- When preparing a dish, try increasing the proportion of whole grains to other ingredients. Substitute whole-wheat flour and/or oatmeal for part of the white flour in flour-based recipes. Start with 10-percent whole-grain flour or grains, and gradually increase the amount each time the recipe is prepared. You may need to add a bit more leavening. Try this with pizza crust, which is usually made with white flour; for example, serve a thicker whole-grain pizza crust.
- Add whole grains such as pre-cooked oats and brown rice to ground beef in meat loaf and similar casseroles.
- Use brown rice or barley to thicken soups.
- Use whole-grain noodles, oats, cornmeal and brown rice in main dishes or in side dishes such as salads, hot grain products, and desserts.

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- Make French toast with whole-wheat bread.
- Introduce children to whole-wheat bread by serving sandwiches with one slice of whole-wheat bread and one slice of white bread.
- Serve submarine sandwiches on whole-wheat rolls.

What are some common grains?

Five common grains — wheat, corn, oats, rice, and rye — are listed below, along with some of the forms in which you might buy or use them. Also listed are the names of four other grains you might try using.

Wheat	Corn	Rice
Whole wheat	Corn meal	Brown rice
Cracked wheat	Corn tortillas	Wild rice
Wheat Berries	Corn tortilla chips	
	Corn tortilla shells	
Oats	Rve	Other argins
Rolled Oats	Rve flakes	Amaranth
Oat meal	Rve flour	Barley
Oat flour		Millet
		Quinoa

Vary Your Veggies and Focus on Fruits

Vegetables and Fruits

Tips for vegetables and fruits:

- Offer a variety of fruits and vegetables. Choose vegetables from each of the five vegetable subgroups (dark green, orange, legumes [dry beans], starchy, and other vegetables).
- Serve a sufficient amount of fruits and vegetables to meet meal pattern requirements or greater.
- Buy fruits and vegetables in season for better prices and tastier produce.
- Offer choices of two or more fruits or vegetables to let students select what they like to eat.
- Use a different combination of two or more servings of vegetables and fruits each day. Include all forms fresh, canned, frozen, and dried.

Vary your veggies.

• Offer high fiber vegetables, such as cooked dry beans, broccoli, tomatoes, leafy greens, carrots, and potatoes with skin.

- Add fresh spinach to salad greens on the salad bar. Broccoli and cauliflower florets, grated carrots, sliced green peppers, corn, and tomatoes are all popular.
- Increase the serving size of vegetables.
- Season vegetables with herbs for taste appeal.
- Offer raw vegetable salads and pre-cut raw vegetables.
- Serve vegetables as finger foods, or try combining two or three vegetables to contrast colors and textures (carrot and celery sticks, tomatoes and cucumbers). Serve colorful vegetable cups often.
- Cut vegetables into various shapes, such as carrot coins or green bean sticks.
- Use green peppers, mushrooms, zucchini and onions as pizza toppings; add spinach or broccoli to lasagna.
- Prepare some meals around a vegetable main dish such as a vegetable stir-fry or soup.
- Include cooked dry beans or peas in mixed dishes such as chili or minestrone soup.
- Include chopped vegetables in pasta sauce or lasagna.
- Add vegetables to baked products. Carrot muffins and zucchini nut bread are a few examples.
- Shred carrots or zucchini into quick breads, muffins, meatloaf, and casseroles.
- Use pureed, cooked vegetables such as potatoes to thicken soups, stews, sauces, and gravies.

Focus on fruits.

- Offer fruits high in dietary fiber such as those with edible skins-like apples, pears, nectarines, peaches-and those with edible seeds, such as berries and bananas. See the screened box on page 110 to compare the dietary fiber in common fruits.
- Serve whole fruits (fresh, frozen, canned, dried) rather than fruit juice most often to ensure adequate fiber intake.
- Increase the serving size of fruits.
- Offer fruit as a topping on cereal, pancakes, and waffles. Good choices might include: bananas, canned peaches, strawberries, raisins, or cinnamon applesauce.
- Add fruit to baked products. Pumpkin raisin bread, blueberry-banana oatmeal bread, and cinnamon raisin rolls are a few examples.
- Serve fresh or frozen fruit salads as side dishes.
- Team fruits with yogurt, cottage cheese, or tuna salad.
- Plan to use fresh, frozen, canned or cooked fruits in colorful fruit cups and desserts.

Add fresh or dried fruits to canned fruits.

- Serve fresh fruits for naturally sweet foods. Serve fresh, baked, or dried fruits for snacks and naturally sweet desserts
- Serve fruits as finger foods, or try combining two or three fruits to contrast colors and textures (peach slices and grapes, strawberries and bananas).
- Cut fruits into various shapes, such as apple wedges and kiwi coins.

How much fiber is in your fruit?

As you can see from this list, some fruits are higher in fiber than others. In addition, a particular fruit may have lots of fiber in one form — for example, fresh with skin — and practically none in another form, such as juice. Compare below the amount of fiber in a fresh apple, applesauce, canned apple slices, and apple juice.



Fruit	Portion Size	Dietary Fiber (in grams)
Apple with skin	1 medium	3.3
Apple juice	1/2 cup	0
Applesauce	1/2 cup	1.5
Apple slices, canned	1/2 cup	1.9
Cantaloupe	1/2 cup	0.7
Grapes	1/2 cup	0.7
Kiwi	1 medium	2.3
Orange	1 medium	3.2
Orange juice	1/2 cup	0.2
Peaches, canned	1/2 cup	1.6
Peaches, dried	5	5.3
Peaches, frozen	1/2 cup	2.2
Peach with skin	1 medium	1.5
Pear with skin	1 medium	5.1
Pear, canned	1 half	1.2
Pineapple, canned	1/2 cup	1.1
Pineapple juice	1/2 cup	0
Raisins	1/4 cup	1.3
Strawberries	1/2 cup	1.7
Strawberries, frozen	1/2 cup	2.4
Watermelon	1/2 cup	0.6

Get your calcium-rich foods.

- Offer fat-free or low-fat milk and milk products with meals.
- Use fat-free or low-fat milk for all or part of the water in oatmeal and other hot cereals.
- Use fat-free or low-fat milk when making condensed cream soups (such as cream of tomato).

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- Offer fat-free or low-fat plain and flavored yogurt. Top cut-up fruit with flavored yogurt or make a dip for fruit or vegetables from low-fat yogurt.
- Top a baked potato with fat-free or low-fat yogurt.
- Top casseroles, soups, stews, or vegetables with shredded low-fat cheese.
- For dessert, make chocolate or butterscotch pudding with fat-free or low-fat milk.

Find the balance between food and physical activity

Get the most nutrition out of your calories and get adequate nutrient within calorie needs.

The best way to give a body the balanced nutrition it needs is by offering a variety of nutrient-rich foods every day. Just be sure to stay within the daily calorie needs. Fruits, vegetables, grains and milk products are all important to a healthful diet. When increasing intake of fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products, it is important to decrease the intake of less-nutrient-rich foods to control calorie intake. It's important to encourage students to make smart food choices and watch portion sizes.

- Offer nutrient-rich foods that are lower in calories and limit foods high in saturated fat, *trans* fat, cholesterol, sodium, and added sugars.
- Offer plenty of vegetables, fruits, and whole grains.
- Offer children correct portion sizes.
- Offer sweetened cereals, sweet breads and desserts in moderation or offer fruit as an option.

Meat or Meat Alternates

- Use a variety of lean meat or meat alternates, such as eggs, turkey sausage, ham, low-fat cheese, fat-free or low-fat yogurt, reduced-fat peanut butter, and fat-free refried beans.
- Plan and serve a different lean meat or meat alternate (or combination of meat or meat alternates) each day of the week.
- Offer a variety of menu choices vegetarian as well as meat entrées.
- Serve eggs alone or in combination with different meats or cheeses, and prepare them in a variety of ways. In addition to scrambled or hard-cooked eggs, you might try preparing omelets, egg muffin sandwiches, breakfast burritos, or French toast.
- Try a deli sandwich bar with lean meats, a pasta bar, or a taco bar.
- Add an entrée salad or salad bar as a choice. Consider offering pre-plated fruit or vegetable salads with cottage cheese, yogurt, or other meat/meat alternates. These can be a quick-serve entrée.

Grains and Breads

- Use a variety of low-fat, whole-grain bread products such as toast, biscuits, muffins, pancakes, bagels, cereals, tortillas, and sandwiches. (For more information on Grains/ Breads, see Appendix 4, Grains/ Breads Instruction.)
- Purchase or prepare whole-grain loaf breads or hot breads such as rolls, sandwich buns, or cornbread several times each week.
- Use a variety of whole-grain hot and cold cereals. Look for cereals that supply fiber and contain moderate amounts of sugar and salt.
- Include a variety of enriched or whole-grain macaroni, noodles and other pasta products or brown rice in entrées and side dishes. Consider serving brown rice as well as white rice.
- Serve Spanish rice with whole-grain tacos or burritos.
- Offer whole-wheat crackers or cornbread with chili.



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Vegetables And Fruits

- Offer a variety of fruits and vegetables in various forms fresh, canned, frozen, and dried.
- Offer a variety of full-strength fruit or vegetable juices such as: apple, grape, pineapple-orange, pineapple-grapefruit, orange, and tomato.
- Offer different combinations of two or more servings of vegetables and fruits each day.
- Include foods high in vitamin A two to three times a week. Include vitamin C-rich foods daily.
- Serve seasonal fresh fruits whenever possible.
- Offer a salad bar or potato bar.

Milk

- Offer a variety of low-fat and fat-free milk choices as a beverage and/or on cereal.
- Flavored milk is very acceptable in fat-free and low-fat versions, but test student acceptance before offering with cereal.



Be physically active everyday

Regular physical activity is important to maintaining health. It uses calories, helps with weight control, and assists in the prevention of certain diseases later in life. While physical activity is not a Child Nutrition Program requirement, it is important that children be provided a healthy environment. Using the information provided in the other recommendations will assist you in providing healthy school meals and a healthy environment for your target populations. Offering correct portion sizes and promoting regular physical activity are just a couple of the ways that you can model healthy habits to your students. For more information, see Chapter 1.

Know the limits

- Know your fats- Look for foods low in saturated fats, trans fats, and cholesterol.
- Don't sugarcoat it- Choose and prepare foods and beverages with little added sugars or caloric sweeteners.
- Reduce sodium (salt) rich foods, and increase potassium.

Know your fats-Look for foods low in saturated fats, trans fats, and cholesterol.

Tips for serving the right types and amounts of fats:

- Limit solid fats like butter, stick margarine, shortening, and lard, as well as foods that contain these.
- Check the Nutrition Facts Label to keep saturated fats and *trans* fats low.
- Make most fat sources from polyunsaturated and monounsaturated fatty acids such as fish, nuts, and vegetable oils, such as olive or canola oil.
- Purchase soft margarine, which is lower in saturated fat and *trans* fat than stick margarine.
- Balance higher fat foods in menus with items lower in fat. For example, with chicken nuggets serve baked potatoes or steamed fresh vegetables rather than french fries.
- Use moderate amounts of high-fat condiments like mayonnaise. Instead, offer or use low-fat mayonnaise, mustard, catsup, and vegetable relishes, such as salsa.

Meat or Meat Alternates

- Offer lean meats, fish, poultry, cooked dry beans, dry peas, lentils or vegetable proteins. Purchase meat and meat alternate products in which fat has been reduced. Use the food label to select products that are lowest in saturated fat, *trans* fats, and cholesterol.
- Be careful when selecting precooked breaded meats, fish, or poultry (example: chicken nuggets or fish sticks). Check the fat content printed on the Nutrition Facts Panel and select those that are lower in fat.
- Use processed meats such as luncheon meat, sausage, or hot dogs sparingly, since these items are generally higher in fat. Offer lower fat luncheon meats.
- Serve main dishes that can be prepared without added fat. Bake, broil, steam, or boil instead of fry. Trim fat from meats. Drain all meat after cooking.
- To lower the weekly fat and saturated fat content, try alternating main dishes containing eggs and meat with ones that include whole grains, vegetables, and/or fruit.
- Consider serving dishes that combine meat or meat alternate with grains beans and rice, for example.
- Offer cooked dry beans or canned beans in main dishes two to three times per week. Serve bean-based entrées, such as bean burritos, tostadas, and chili.
- Use part-skim mozzarella cheese and low-fat cottage or ricotta cheese in recipes listing cheese as an ingredient.
- Offer low-fat turkey, water-packed tuna, low-fat cottage cheese or yogurt with pre-plated vegetable or fruit salads.
- Enhance flavor with low-fat gravies and sauces.

Grains and Breads

- Offer a selection of lower fat whole-grain products such as pancakes, bagels, English muffins, and pita bread.
- Make or buy low-fat whole grain baking mixes.
- Prepare whole-grain noodles, brown rice, barley, and bulgur with little or no added fat.
- Substitute English muffins for biscuits to lower the fat content of breakfast sandwiches.
- To lower saturated fat, cut the fat in recipes by 1/4 or 1/3 without losing the great taste. (See pages 170 to 172 for suggestions on how to retain quality and acceptability.)
- Use vegetable oil, *trans* fat free soft margarines, or fruit purees instead of butter, lard, or shortening.
- Use a non-stick cooking spray to grease baking pans.



Vegetables and Fruits

- Prepare fruits and vegetables used in recipes without adding fat.
- Steam, simmer, or bake vegetables without adding butter.
- Use non-stick cooking spray when sautéing or baking potatoes.
- Offer baked French fries or seasoned baked potato wedges instead of deep-fried French fries.
- Season vegetables with herbs, spices, salsa, and lemon juice.
- Offer reduced-fat or fat-free salad dressings.
- Substitute plain low-fat or fat-free yogurt for part or all of the mayonnaise or creamy salad dressings in salads.
- Serve fresh vegetable strips with low-fat yogurt dip, salsa, or fat-free salad dressing.
- When serving salads, add sliced avocado or nuts to improve variety and taste.
- Serve fruit for dessert.

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Add salsas for fresh flavor...and less fat:

By substituting salsa for sauces that are higher in fat, you can cut back on fat and sodium. Compare:

SAUCE (1/4 cup)	FAT (grams)	CALORIES	SODIUM (milligrams)
Salsa	1 g	30 calories	70 mg
Basic white sauce	6 g	76 calories	211 mg
Cheese	9 g	118 calories	252 mg

Milk

Encourage choices that are lower in fat. Offer low-fat (such as 1 percent) and fat-free (skim) milk to help decrease the fat content of meals.

Don't sugarcoat it – Choose and prepare foods and beverages with little added sugars or caloric sweeteners.

• Always check the ingredients for added sugars (e.g., corn syrup, high fructose corn syrup, honey, and fructose). Foods that have added sugars as one of the first two ingredients are high in sugar content.

Grains and Breads

- Offer a variety of unsweetened or lightly sweetened dry cereals. If children are reluctant to give up higher sugared cereals, mix a small amount of the higher sugar cereal with the non-sugary cereal.
- Use fruit as a topping on dry and cooked cereals.
- Modify recipes of sweet breakfast breads, snacks, and desserts when you do serve them to reduce sugar without compromising quality. Add fruits, vegetables, and nuts for added flavor and texture.
- Use spices such as cinnamon, nutmeg, and cloves to flavor foods without using sugar.

Vegetables and Fruits

- Buy fresh fruits and vegetables in season when they may be less expensive and at their peak flavor. Avoid adding sugar or honey to fresh fruits.
- Do not add sugar to vegetables such as stewed tomatoes, corn, or green beans.
- Use fruits packed in light syrup, juice, or water. Since these are already sweet, there is no need to add sugar.
- Use fresh or frozen fruit for desserts.

Reduce sodium (salt) rich foods, and increase potassium

Tips to reduce sodium:

- Read the Nutrition Facts Panel for sodium content. Select foods that are lower in sodium.
- Learn to use spices and herbs, rather than salt, to enhance the flavor of food.
- Serve smaller amounts of salty condiments such as salad dressings, mustard, soy sauce, catsup, pickles, and olives or serve them less often.
- Offer salt-free seasonings as an alternative to salt. For example, mix herbs and put into marked shakers on serving line for self-serve by students.

Meat or Meat Alternates

- When purchasing ready-made foods, especially processed products such as soups, meats, and main dishes, check the sodium content and select foods that have less

 for example, those using herbs and spices. Read Nutrition Facts Panel carefully for sodium content.
- When preparing foods, use lower sodium products. Review recipes for ways to reduce sodium, such as substituting herb blends and spices for salt.
- Choose fresh or frozen fish, shellfish, poultry, and meat most often. They are lower in salt than most canned and processed forms.
- Serve homemade instead of canned soups.

Grains and Breads

- Modify recipes when you do prepare them to reduce salt without sacrificing quality.
- Use spices such as cinnamon, nutmeg, and cloves to flavor foods such as cooked cereals and baked goods without adding salt.
- Do not add salt when cooking pasta and rice. Use herb blends in pasta, rice, and savory side or main dishes without adding salt for added flavor.
- Offer a variety of lower sodium ready-to-eat cereals.
- Limit the number of times you serve salty foods such as crackers or pretzels and offer them in smaller amounts.

Vegetables and Fruits

- Serve more fresh vegetables and fruits, which are naturally low in sodium.
- Purchase fresh and plain frozen or canned vegetables without added salt most often.
- Alternate fresh vegetables with canned and frozen vegetables when menu planning.
- Use herbs and spices to flavor vegetables.
- Offer potassium-rich fruits (fruit from the vine, apricots, bananas, cantaloupe, orange juice, and dried peaches) and vegetables (sweet potatoes, white potatoes, tomato products, white beans, lima beans, winter squash, and spinach) at meals.

Milk

• Offer fat-free or low-fat milk and milk products.

How much sodium does a food contain?

Processing can make a big difference. Compare the sodium content (in milligrams) of four common vegetables in three forms — fresh, frozen, and canned:

Vegetable (1/2 cup)	Fresh	Frozen	Canned	Canned No Salt Added
Carrots	44 mg	43 mg	176 mg	31 mg
Corn	14 mg	3 mg	285 mg	3 mg
Green Beans	1 mg	1 mg	175 mg	1 mg
Peas	3 mg	58 mg	212 mg	2 mg

USING THE NUTRIENT STANDARDS AS PLANNING TOOLS

As you develop your breakfast and lunch menus, think of the nutrient standards as planning tools. Use them as guideposts to help select and prepare foods. Use them to market your product: Tell parents and students school meals are the best deal in town for nutrition as well as taste!

In Chapters 1 and 2, we looked at the nutrient standards — what they are and why they are such an important part of the *School Meals Initiative for Healthy Children*.

- We saw that to meet the standards, schools will need to achieve certain target levels for: calories (also called Energy Allowances), protein, calcium, iron, vitamin A, vitamin C, calories from fat, and calories from saturated fat.
- We also saw that while the nutrient standards do not set <u>specific</u> target levels for cholesterol, sodium, and dietary fiber, these are also important considerations. You will want to work to *reduce* cholesterol and sodium and *increase* dietary fiber.

Let's take a closer look at the key nutrients and dietary components singled out in the nutrient standards. What do they contribute to good health? What are some common food sources?

Take a moment to review the charts on pages 27 through 30 for Food-Based Menu Planning or pages 69 through 72 for Nutrient-Based Menu Planning. These show you the school week averages you will be working to achieve for various age/grade groups.

As you look over the charts, remember: The figures shown reflect levels in effect in 1995. Specific levels may change from time to time as the Recommended Dietary Allowances (RDA) and the Dietary Guidelines for Americans are updated to reflect new nutrition knowledge. What is important in this section is understanding how to use the target levels as guides for planning healthy meals.

CALORIES

What are the target levels? The nutrient standards set age-appropriate target levels for calories. Here are a few examples using the Enhanced Food-Based Menu Planning approach for lunch (see chart on page 28):

If you are planning lunch for Grades K-6, you will aim to meet a target level of 664 calories for Energy Allowances. In other words, when averaged over the school week, a lunch for this age group should provide at least 664 calories. If you are planning lunch for Grades 7-12, your target level will be considerably higher — 825 calories per lunch when averaged over the school week.

As we saw in Chapter 1, it's important to be sure you balance calories and fat intake. If you are having trouble providing adequate levels of calories, see the screened box below for some tips.

Here are some menu planning tips for balancing calories and fat intake:

1. When planning meals, consider substituting menu items, adjusting serving sizes, or adding condiments.

Substitute higher calorie menu items for lower calorie menu items, keeping in mind all other nutrient standards (such as target goals for calories from fat).

Increase serving sizes of low-fat food items where appropriate and affordable — for example, offer larger serving sizes and/or extra servings of bread and rolls.

Add menu items, considering all other nutrient standards and costs of the items.

Add condiments, such as honey, jams, jellies, catsup, low-fat gravies or sauces, fruit toppings, low-fat whipped topping, where appropriate.

2. When cooking, substitute or add ingredients.

Use reconstituted nonfat dry (NFD) or nonfat fluid milk when recipe calls for "water or milk." Use juice in place of water in gelatins.

Add dried, canned, frozen, or fresh fruit to bread/cake/muffin recipes. Add corn to cornbread/muffin recipes.

3. Keeping students' preferences in mind, modify recipes and introduce new combinations of foods.

To salads or salad bar selections, try adding croutons, low-fat or fat-free cheese, red or black beans, peas, Oriental noodles.

Add or increase amount of foods like pasta, rice, potatoes, corn, and peas in stews, soups, and casseroles.

Increase amount of bread in sandwiches, and pizza. Introduce more whole-grain foods.

Add sauces or toppings to menu items. For example, try honey-mustard sauce on chicken, low-fat or fat-free sour cream on Mexican entrées.

With baked potatoes, offer toppings like vegetable chili or low-fat cheese, or low-fat or fat-free sour cream. Add beans to tacos, burritos, chili, and other Mexican dishes.

4. Be creative with desserts.

Offer low-fat, high-carbohydrate desserts more frequently, including ones that contain fruits, vegetables, and/or whole grains.

Consider serving angel food cake as well as lower fat versions of richer tasting cakes.

Top fruited gelatin with fat-free yogurt. Consider serving low-fat frozen yogurt, ice milk, sherbet, and fat-free milk pudding.

PROTEIN

What are the target levels? The nutrient standards set target levels for grams (g) of protein. Here's another example from the chart on page 28:

If you are planning lunch for Grades K-6 with the Enhanced approach, your goal will be to provide at least 10 grams of protein per lunch when averaged over the school week. For Grades 7-12, your target level for a school week average will be 16 grams per lunch.

What does protein contribute to good health? While we use the word "protein," there are actually many different proteins. Proteins build and repair body tissues. They help antibodies fight infection. And they supply energy (4 calories per gram) if more protein is con-sumed than needed to build and repair body tissues.

What are food sources for protein? Meat, poultry, fish, eggs, milk, yogurt, cheese, dry beans, dry peas, nuts, nut butters.

CALCIUM

What are the target levels? The nutrient standards set target levels for milligrams (mg) of calcium. Looking at the chart on page 28, you will see:

If you are planning lunch for Grades K-6 with the Enhanced approach, you will aim to provide at least 286 milligrams of calcium per lunch when averaged over the school week. For Grades 7-12, your target level for a school week average will be 400 milligrams per lunch.

What does calcium contribute to good health? Calcium is needed for healthy bones. It also helps in blood clotting and aids in muscle contraction and normal nerve functions.

What foods are good sources of calcium?

- Major sources include dairy products, such as milk (fat-free, low-fat, and reduced fat) and milk products such as cheese, yogurt, cottage cheese, ice milk. Puddings made with milk can also provide substantial amounts of calcium.
- Non-dairy sources of calcium:
 - Meat and Meat Alternates: Soybeans, canned salmon, cowpeas (Blackeyes), ocean perch, rainbow trout, sesame butter, baked beans, tofu, calcium fortified soy beverage, and almonds
 - Grains and Breads: Ready-to-eat fortified cereals, fortified oatmeal and hot cereals, English muffins or other breads, enriched, with calcium propionate.
 - Vegetables and Fruits: Leafy green vegetables (collards, dandelion greens, turnip greens, kale, and spinach), Chinese cabbage, okra, cowpeas (Blackeyes), white beans, baked beans, and calcium fortified fruit juices.

IRON

What are the target levels? The nutrient standards set targ et levels for milligrams (mg) of iron. Looking at the chart on page 28, you will see:

If you are planning lunch for Grades K-6 with the Enhanced approach, you will aim to provide at least 3.5 milligrams of iron per lunch when averaged over the school week. For Grades 7-12, your target level for a school week average will be 4.5 milligrams per lunch.

What does iron contribute to good health? Most important, iron combines with protein in the blood to form hemoglobin.

What foods are sources for iron? For easy reference, several foods are grouped below under: Meat/Meat Alternates, Grains/Breads, Vegetables, and Fruits.

Meat and Meat Alternates:

Soybeans, legumes/beans (baked, white, kidney, navy, chickpeas (garbanzo), great northern, black, pinto, cowpeas (blackeyed), lentils, split peas), beef liver, beef (chuck, bottom round, ground), turkey, chicken, pork, fish, shrimp, clams, and frankfurters.

Grains and Breads:

Fortified ready-to eat or cooked cereals, breads made with enriched flour (bread, rolls, biscuits, cornbread, pita, pizza crust, tortillas, muffins), egg noodles, macaroni, spaghetti, and enriched rice.

Note: Read the Nutrition Facts Panel on ready-to-eat cereals and prepared food items for amounts in the product.

- Vegetables: Soybeans, legumes/beans (baked, white, kidney, navy, chickpeas (garbanzo), great northern, black, pinto, cowpeas (blackeyed), lentils, split peas), spinach, baked or boiled potato, sauerkraut, peas, turnip greens, collards, beets, aspargus, sweetpotato, tomato products (paste, sauce, raw), brussel sprouts, mixed vegetables.
- **Fruits:** Cherries, plums, raspberries, prune juice and strawberries

VITAMIN A

What are the target levels? The nutrient standards set target levels for Retinol Equivalents (RE) of vitamin A based on the 1995 nutrient standards. Currently, the RDA's express vitamin A recommendations in Retinol Activity Equivalents (RAE). As more nutrient content information becomes available, future nutrient standards may be expressed in this unit. Looking at the chart on page 28, you will see:

If you are planning lunch for Grades K-6 with the Enhanced system, you will aim to provide at least 224 RE of vitamin A when averaged over the school week. For Grades 7-12, your target level for a school week average will be 300 RE per lunch.

What does vitamin A contribute to good health? Vitamin A helps keep eyes healthy and able to adjust to dim light. It helps keep skin healthy. It helps keep the lining of the mouth, nose, throat and digestive tract healthy and resistant to infection. It promotes growth.

What foods are sources for vitamin A?

- Milk: Vitamin A-fortified milk (reduced-fat, fat-free, low-fat).
- Grains and Breads: Ready-to-eat cereals, with added vitamin A, and instant fortified cooked cereals
- **Vegetables:** Sweet potato, pumpkin, carrots, red sweet peppers, mixed vegetables, leafy green vegetables (collards, kale, mustard greens, dandelion greens, turnip greens, spinach green leaf lettuce), winter squash (acorn, butternut, Hubbard), red sweet pepper, Chinese cabbage, vegetable juice cocktair, peas, and broccoli.
- **Fruits:** Cantaloupe, apricots (canned and dried), grapefruit, plums, and tangerines (canned, mandarin oranges)

VITAMIN C (Ascorbic Acid)

What are the target levels? The nutrient standards set target levels for milligrams (mg) of vitamin C. Looking at the chart on page 28, you will see:

If you are planning lunch for Grades K-6 with the Enhanced approach, you will aim to provide at least 15 milligrams of vitamin C when averaged over the school week. For Grades 7-12, your target level for a school week average will be 18 milligrams per lunch.
What does vitamin C contribute to good health? Vitamin C helps strengthen blood vessels and hastens healing of wounds and bones. It increases resistance to infections, and it helps the body absorb iron in the diet.

What foods are sources for vitamin C?

- Vegetables: Broccoli, Brussels sprouts, sweet red and green peppers, red and green chili peppers, cauliflower, leafy green vegetables (collards, kale, mustard greens, cabbage, dandelion greens, turnip greens, spinach), kohlrabi, asparagus, okra, potatoes (baked, boiled, or steamed, reconstituted instant mashed/vitamin C restored), sauerkraut, soybeans, sweet potatoes, tomatoes products (raw, juice, paste, puree, sauce), cauliflower, lima beans, squash (summer and winter), corn, peas, and rutabagas.
- Fruits: Oranges, orange juice, papayas, guavas, kiwi, grapefruit, grapefruit juice, grapefruit/orange juice, mangoes, pineapple juice (canned/vitamin C restored), strawberries, tangerine juice, tangerines (mandarin oranges), cantaloupe, honeydew melon, raspberries, tangelos, peaches, watermelon, banana, star fruit (carambola) and grapes.

CALORIES FROM FAT AND FROM SATURATED FAT

What are the target levels? The nutrient standards set target levels for: (1) calories from fat; and (2) calories from *saturated* fat.

- No more than 30 percent of total calories should come from fat.
- Less than 10 percent of total calories should come from saturated fat. (Keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.)

Here's an example: We'll start by looking at the chart on page 28 to find the calorie goal for lunch for a particular age/grade group. We'll then determine the maximum number of these calories that should come from fat and from saturated fat when averaged over the school week.

DETERMINE THE MAXIMUM NUMBER OF CALORIES THAT SHOULD COME FROM OVERALL FAT.

We're planning lunch for Grades K-6 using the Enhanced approach. The chart shows we should provide a school week average of at least 664 calories per lunch.

To determine the target level for fat, we'll multiply 664 calories by 30 percent (664 x .30). The result: When averaged over the school week, no more than 199 calories per lunch should come from fat for this age/grade group.

STEP 2

DETERMINE THE MAXIMUM NUMBER OF CALORIES THAT SHOULD COME FROM SATURATED FAT:

To determine the target level for saturated fat, we'll multiply this 664 calories by 10 percent ($664 \ge .10$). The result: When averaged over the school week, no more than 66 calories per lunch should come from saturated fat for this age/grade group.

STEP 3

CONSIDER TOTAL FAT AND SATURATED FAT TOGETHER:

In this example, we've seen that no more than 199 calories should come from fat of any type. Of these 199 calories from fat, no more than 66 calories should come from saturated fat.

While the nutrient standards do not set specific target levels for trans fat or cholesterol, you will want to work to lower trans fat or cholesterol intake. In the screened box below and on page 126 are some ideas for lowering fat, saturated fat, trans fat and cholesterol.

Here are some ideas for lowering fat, saturated fat, trans fat and cholesterol:

What can you do to lower fat, saturated fat, *trans* fat and cholesterol? You will find lots of tips in Chapter 6. For starters, however, review the abbreviated list below. As the list shows, serving lower fat meals begins with the decisions you will make during menu planning.

Included are ideas for planning menus and purchasing, preparing, and serving food. This is not a complete list — look it over and think about what you might add. (An asterisk (*) next to an idea indicates it will decrease saturated fat.)

Menu Planning

- Offer a "light meal option" each day.
- Use angel food or sponge cakes which contain little fat.*
- Substitute lean ham for bacon or sausage.*
- Make pizza with reduced fat cheese and lean ham instead of sausage or pepperoni.*
- Serve grilled chicken instead of deep-fried chicken patties.
- Offer mustard, ketchup and/or low-fat mayonnaise with sandwiches.
- Offer hot sauce with greens instead of seasoning with butter.*

Purchasing

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- Purchase low-fat and/or fat-free milk and other fat-free or low-fat dairy products.
- Review the prepared entrée products you purchase to determine if lower fat products would be acceptable and affordable.
- Find lower fat breakfast products or menu items to offer more frequently instead of higher fat items. For example: lower fat breakfast pizza, fruit muffins, or pancakes; low-fat cinnamon rolls with light glaze or powdered sugar dusting.*
- Purchase oven-ready French fries instead of fries for deep-fat frying.
- Purchase ground chicken or turkey (without skin) to mix with lean ground beef.*
- Purchase leaner meats (such as ground beef with no more than 15% fat).*
- Purchase tuna packed in water instead of oil.
- Purchase reduced-fat processed meats, such as reduced-fat frankfurters and deli-meats.*
- Purchase some lower fat salad dressings. Try newest versions of low-fat and fat-free mayonnaise, especially for use in salads or salad dressing mixes.
- Purchase lower fat variety breads (such as bagels, pita bread, corn tortillas, English muffins, etc.) to offer more frequently instead of higher fat grain products such as croissants, doughnuts, and sweet rolls.*
- Revise specifications to prohibit saturated vegetable oils, such as coconut oil, palm oil, palm kernel oil, and hydrogenated shortening or stick-type margarine.*
- Purchase soft margarine which is lower in *trans* fat and saturated fat than stick margarine.*

Preparing and Serving

- Use only enough salad dressing to lightly coat salad. Excess dressing can add unnecessary fat.
- Where appropriate for the finished product, steam meats and vegetables instead of sauteing.
- Use non-stick cooking spray in place of oil or shortening for braising and sauteing.*
- To prevent baked products from sticking, use non-stick cooking spray or parchment paper, as appropriate.
- Use fat-free fluid or reconstituted fat-free dry milk instead of whole milk in cooking.*
- Reduce the amount of cheese on sandwiches (for example, 1/2 ounce instead of 1 ounce) and increase the amount of lean meat.*
- Use part-skim mozzarella cheese in pizza, salad bar offerings, and tacos.*
- When not needed to meet Meat/Meat Alternate requirements, reduce the amount of cheese in recipes. Boost cheese flavor with enhancers such as dry mustard and lemon juice. Make casserole toppings by reducing cheese and combining with dry bread crumbs and herbs.*
- Thicken soups with instant potato flakes instead of cream sauce. To thicken gravies and sauces without adding fat, mix cornstarch with a small amount of cold liquid to make a slurry.

SAMPLE LUNCH MENUS FOR A TYPICAL WEEK

EXAMPLE #1: USING TRADITIONAL FOOD-BASED MENU PLANNING

Here are 1 week's lunches planned with the Traditional Food-Based Menu Planning approach. Because of the ages of the students to be served, the menu planners have used the Traditional meal pattern for *Grades 4-12*.

For every day, they have listed what items are planned and what each contributes to meeting meal pattern requirements. They've used the following abbreviations for the required food components:

M/MA	=	Meat/Meat Alternate
G/B	=	Grains/Breads
F/V	=	Fruit/Vegetable
FL MK	=	Fluid Milk (served as a beverage)

After Friday's menu, they have totalled and noted the number of Grains/Breads offered for the week. This is because there are weekly as well as daily requirements for Grains/Breads with Food-Based Menu Planning. For additional information on requirements and meal patterns for the Traditional approach, see Chapter 2.

MONDAY	Meal Pattern Contribution
Beef Steak on Multi-Grain Bun (2 oz bun) with Reduced-Fat Mayonnaise - OR -	2 oz M/MA + 2 G/B
Breaded Chicken Nuggets with Honey BBQ Sauce with Whole-Wheat Roll (2 oz)/Margarine	2 oz M/MA + 2 G/B
Oven-Fried Potato Wedges (with Catsup as condiment) Chilled Applesauce	1/2 cup F/V 1/2 cup F/V
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)

TUESDAY	Meal Pattern Contribution
Chicken Stir-Fry with Chinese Noodles (1/2 cup) and Steamed Rice (1/2 cup)	2 oz M/MA + 2 G/B + 1/2 cup F/V
BBQ Beef on Whole-Wheat Bun (2 oz) and with Cole Slaw	2 oz M/MA + 2 G/B + 1/4 cup F/V
Garden Peas Chilled Pineapple Tidbits	1/4 cup F/V 1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)
Gingerbread with Whipped Topping	
WEDNESDAY	Meal Pattern Contribution
Tuna Salad on Bun (2 oz) - OR -	2 oz M/MA + 2 G/B
Vegetable Lasagna with Italian Bread (1 oz)/Margarine	2 oz M/MA + 2 G/B + 3/4 cup F/V
Lettuce and Tomato Carrot Sticks	1/4 cup F/V 1/4 cup F/V
Fresh Grapes	1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)
THURSDAY	Meal Pattern Contribution
Turkey/Cheese Club Bagel (2 oz) with Lettuce/Tomato/ Reduced-Fat Mayonnaise/Mustard	2 oz M/MA + 2 G/B + 1/4 cup F/V
Sausage Pizza with Bread Stick and Marinara Sauce	2 oz M/MA + 2 G/B + 1/4 cup F/V
Golden Corn Fresh Orange Wedges	1/4 cup F/V 1/4 cup F/V
Fluid Milk - 1% unflavored, 1/2% chocolate, fat-free	1 - 8 fl oz (1 cup)

FRIDAY	Meal Pattern Contribution
Honey Lemon Chicken with Brown Rice Pilaf (1/2 cup) - OR -	2 oz M/MA + 1 G/B
Chili Beans/Cheese with Dinner Roll (1 oz)/Margarine	2 oz M/MA + 1 G/B
Fresh Broccoli and Cauliflower Pieces with Ranch Dip	1/4 cup F/V
Green Beans	1/4 cup F/V
Peach Half	1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)

Whole-Wheat Sugar Cookie

Total number of Grains/Breads offered for week = 9

EXAMPLE #2: USING ENHANCED FOOD-BASED MENU PLANNING

Here are 1 week's lunches planned with the Enhanced Food-Based Menu Planning approach. In this instance, the menu planners will be serving junior high and high school students, so they have used the Enhanced meal pattern for *Grades 7-12*.

As with Example #1:

- For each day's menu, the planners have listed what food items are planned and what each contributes to meeting meal pattern requirements.
- Components are abbreviated: M/MA = Meat/Meat Alternate; G/B = Grains/Breads; F/V = Fruit/Vegetable; FL MK = Fluid Milk (served as a beverage).
- At the end of the week, the planners have indicated the total number of Grains/ Breads offered. As with Traditional Food-Based Menu Planning, the Enhanced approach has weekly as well as daily requirements for Grains/Breads. For additional information on requirements and meal patterns for Enhanced Food-Based Menu Planning, see Chapter 2.

In this example, dessert *does* count toward meeting meal pattern requirements. (This is not true with the Traditional Food-Based approach.)

MONDAY	Meal Pattern Contribution
BBQ Pork on Whole-Wheat Bun (2 oz) with Coleslaw	2 oz M/MA + 2 G/B + 1/2 cup F/V
Chicken Stir-Fry with Chinese Noodles (1/2 cup) and Steamed Rice (1/2 cup)	2 oz M/MA + 2 G/B + 1/2 cup F/V
Pineapple Tidbits	1/2 cup F/V
Gingerbread with Whipped Topping	1 G/B
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)
TUESDAY	Meal Pattern Contribution
Vegetable Lasagna with Garlic Bread (1 oz)	2 oz M/MA +3 G/B + 3/4 cup F/V
Sub Sandwich (3 oz roll) with Reduced-Fat Mayonnaise with Lettuce, Tomato, & Pickle (and Catsup as condiment)	2 oz M/MA + 3 G/B + 1/4 cup F/V
Tossed Salad with Dressing	1/2 cup F/V
Fresh Apple	1/2 cup F/V
Oatmeal Raisin Cookie	1/4 G/B
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)
WEDNESDAY	Meal Pattern Contribution
Breaded Chicken Nuggets with Honey Mustard Dip	2 oz M/MA + 1/2 G/B
Corn Dog with Mustard	2 oz M/MA + 1/2 G/B
Oven Fries (with Catsup as condiment) Carrot/Celery Sticks with Ranch Dip	3/4 cup F/V 1/2 cup F/V
Whole-Wheat Roll (1 oz) with Margarine	1 G/B
Chocoleana Cake	3/4 G/B
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)

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THURSDAY	Meal Pattern Contribution
Nachos, with Ground Beef with Whole-Wheat Roll (1 oz)	2 oz M/MA + 2 G/B
Fish Fillet on Bun (2 oz) with Tartar Sauce	2 oz M/MA + 2 G/B
Tossed Salad with Dressing Orange Half	1/2 cup F/V 1/2 cup F/V
Steamed Rice (1/2 cup)	1 G/B
Milk - 1% unflavored, 1/2% chocolate, fat-free	8 fl oz (1 cup)
FRIDAY	Meal Pattern Contribution
Spaghetti (1 cup) with Meat Sauce - OR -	2 oz M/MA + 2 G/B +3/8 cup F/V
Honey Lemon Chicken with Steamed Rice (1 cup)	2 oz M/MA + 2 G/B
Steamed Broccoli Fresh Peach	1/2 cup F/V 1/2 cup F/V
Garlic Bread (1 oz)	1 G/B
Peanut Butter Cookie	1/2 G/B

Total number of Grains/Breads offered for week = 15 servings

EXAMPLE #3: USING NSMP OR ASSISTED NSMP

Here are 1 week's lunches planned with NSMP or Assisted NSMP. The students to be served are in *Grades 7-12*.

For every day, the menu planners have listed what items are planned. They've also written appropriate portions — for example, "1 each" for a Turkey Club Bagel, "1/2 cup" for Fruit Cocktail, and "1 portion" for Cherry Cobbler. Two choices are provided for the entrée, vegetables, and fruit/desert group. Three low-fat choices are provided for milk.

The results of the computer nutrient analysis are based on a weighted nutrient analysis of the menu for 500 reimbursible meals. In this case, the nutrient analysis shows the menu weekly average for the following: calcium, cholesterol, sodium, fiber, iron, calcium, vitamin A, vitamin C, protein, carbohydrates, total fat, saturated fat. It also shows percentage of calories from: protein, carbohydrates, total fat, and saturated fat.

For more information on planning meals with NSMP or Assisted NSMP, see Chapter 3. For more information on nutrient analysis and how it's done, see Chapter 5.

of Servings MONDAY Portion with Spanish Brown Rice (B-17)..... 1 cup - OR -Turkey Club Bagel (Whole-Wheat) with Reduced-Fat 1 each...... 100 Mayonnaise and Lettuce and Tomato 1/8 cup with Ranch Dressing Dip (E-19) 2 oz - OR -Broccoli with Cheese Sauce 1/2 cup 150 - OR -Choice of Fluid Milk:

TUESDAY

Portion # of Servings

Hamburger on Whole-Wheat Bun with Lettuce/Tomato/Mustard/Relish - OR - Chicken Fajitas with Tortillas and Salsa (D-40)	1 each 400 1/8 cup 1 each 100
French-Cut Green Beans - OR - Oven-Fried Potato Wedges with Catsup	1/2 cup 100 1/2 cup 400
Fresh Grapes - OR - Cherry Cobbler (C-06)	1/2 cup 150 1 portion
Choice of Fluid Milk: 1% low-fat milk 1% chocolate milk Skim (fat-free) milk	8 fl oz (1 cup)50 8 fl oz (1 cup)400 8 fl oz (1cup)50

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WEDNESDAY

Portion	#	of	Ser	vings
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Vegetable Lasagna (D-50) with Whole Wheat Italian Bread and Margarine - OR - Fish Sandwich on Multi-Grain Bread with Catsup, Tartar Sauce, Pickles	1 portion300 1 slice 1 portion200
Tossed Salad with Italian Dressing - OR - Potato Salad (E-09)	1 cup 300 2/3 cup200
Sweet Potato-Prune Bread Square (B-18) - OR - Fresh Orange	1 piece350 1 each150
Choice of Fluid Milk: 1% low-fat milk 1% chocolate milk Skim (fat-free) milk	8 fl oz (1 cup)50 8 fl oz (1 cup)400 8 fl oz (1 cup)50

THURSDAY

Portion # of Servings

Honey-Lemon Chicken (D-44) with Tater Tots and Catsup and Whole-Wheat Roll with Margarine - OR -	2 pieces
Baked Potato Bar - (Ham, Cheese, Black Beans, Broccoli,	
Carrots, Cauliflower, and low-fat Sour Cream) and Whole-Wheat Roll with Margarine	1 portion200 2 oz roll
Creamy Cole Slaw (E-06) - OR -	1/2 cup200
Seasoned Green Peas	1/2 cup300
Fresh Peaches - OR -	1 each100
Whole-Wheat Cookie (B-02)	1 each
Choice of Fluid Milk:	
1% low-fat milk	8 fl oz (1 cup)50
1% chocolate milk	8 fl oz (1 cup) 400
Skim (tat-tree) milk	8 fl oz (1cup)50

FRIDAY

Portion # of Servings

Taco Pie with Salad Topping (D-45A) - OR -	1 portion	
Chicken Salad (E-05) Sandwich on Multi-grain Bread	1 sandwich200	
Golden Corn - OR -	1/2 cup	
Refried Beans (I-15)		
Watermelon Chuncks	1/2 cup	
Apple Crisp (C-02)	1 portion	
Choice of Fluid Milk:		
1% low-fat milk	8 fl oz (1 cup)	
1% chocolate milk	8 fl oz (1 cup) 400	
Skim (fat-free) milk	8 fl oz (1 cup) 50	

NUTRIENT ANALYSIS - MENU WEEKLY AVERAGE

Cals	Mg Chol	Mg Sodm	G Fibr	Mg Iron	Mg Calc	RE Vit A	Mg Vit C	G Prot	G Carb	G T Fat	G S Fat
824	57	1536	11.03	6.68	589	980	40.68	35.62	120	24.46	7.92
% of % of % of % of	Calorie Calorie Calorie Calorie	s from P s from C s from T s from S	rotein . arbohyc otal Fat aturatec	lrates . Irates .	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · ·	1 5 2	7.30 8.17 6.72 8.65		

EVALUATING WHAT YOU HAVE

Evaluate your meals by asking yourself questions like the ones listed below and on the next page. The questions are in several categories: (1) foods selected; (2) staffing and equipment; (3) cost; (4) recipes and production records; (5) special considerations; (6) meal requirements. This general checklist can be used for *either* Food-Based Menu Planning or Nutrient-Based Menu Planning.

To evaluate how well you are meeting meal requirements for a particular menu planning approach, use one of the three separate checklists that begin on page 137. These are listed at the bottom of page 136.

GENERAL CHECKLIST

(1) Foods Selected:

Do the food choices have appealing colors and textures?	Yes	No
Do the menus have foods with different shapes, sizes, and colors?	Yes	No
Do the breakfast and lunch menus complement each other?	Yes	No
Have you considered special events and promotions?	Yes	No
Have you incorporated seasonal foods and USDA commodities?	Yes	No
Have you introduced any new food items?	Yes	No

(2) Staffing and Equipment:

Can some preparation be done ahead?	Yes	No
Is the workload balanced among employees?	Yes	No
Can you prepare and serve meals with available equipment?	Yes	No
Are oven and surface-cooking areas adequate for items planned?	Yes	No

(3) *Cost:*

Have you considered cost?	Yes 🗌 No	
Do high and low cost foods balance in menus?	Yes No	

(4) Recipes and Production Records:

Have you specified the standardized recipes, preparation techniques, and processed foods to be used?	Yes	No
Have you listed the projected servings for each item?	Yes	No
Are portion sizes stated in correct amounts?	Yes	No
Have you listed on the menu production record the condiments to be served?	Yes	No

(5) Special Considerations:

Is a vitamin C food included three to four times a week?	Yes	No
Are vitamin A foods included two to three times per week?	Yes	No
Are iron-rich foods included each day?	Yes	No
Are whole-grain products offered daily?	Yes	No
Are low-fat entrées and lower in fat milk choices (such as low-fat and fat-free) offered daily?	Yes	No
Are assorted dry cereals offered at least once a week?	Yes	No
Are fresh fruits or vegetables offered on several different days?	Yes	No

(6) Meal Requirements:

Do menus meet the minimum requirements of the particular menu		
planning approach you are using?	Yes	No

To answer this question, complete one of the following checklists:

Checklist 1 for Traditional Food-Basedpage 137	7
Checklist 2 for Enhanced Food-Based page 139	9



After you have selected and recorded the foods and portions you plan to serve, check your menus by answering the questions below.

BREAKFAST

1.	Have you selected the appropriate grade group (or groups) for the students you will be serving?	Yes No
2.	Have you included the required food components and food items in the correct serving sizes?	
	D oes each day's breakfast menu include <i>at least</i> :	
	8 ounces of fluid milk as a beverage or on cereal	Yes No
	1/2 cup fruit or vegetable or full-strength fruit or vegetable juice	Yes No
	One serving from each of the Grains/Breads and Meat/Meat Alternate components OR	
	<i>Two servings from either</i> Grains/Breads or Meat/Meat Alternate?	Yes No
LU	NCH	
1.	Have you selected the appropriate grade group (or groups) for the students you will be serving?	Yes No

2. Have you included the required food components and food items in the correct serving sizes? Are you meeting minimum requirements for each of the grade groups you are serving? (See questions next page.)

IF YOU ARE SERVING GRADES K-3:

Does each day's lunch menu include *at least*...

8 ounces fluid milk as a beverage	Yes	No
1-1/2 ounces Meat/Meat Alternate	Yes	No
1/2 cup Vegetables/Fruits	Yes	No
1 serving of Grains/Breads daily	Yes	No

Do lunch menus for the week meet the *weekly minimum* for Grains/Breads?

A total of 8 servings of Grains/Breads	
over the week	Yes No

IF YOU ARE SERVING GRADES 4-12:

Does each day's lunch menu include *at least*...

8 ounces fluid milk as a beverage	Yes	No
2 ounces Meat/Meat Alternate	Yes	No
3/4 cup Vegetables/Fruits	Yes	No
1 serving of Grains/Breads daily	Yes	No

Do lunch menus for the week meet the *weekly minimum* for Grains/Breads?

A total of 8 servings of Grains/Breads	
over the week	Yes No

IF YOU ARE ALSO USING THE RECOMMENDED (OPTIONAL) GRADE GROUP FOR GRADES 7-12:

Does each day's lunch menu include *at least*...

8 ounces fluid milk as a beverage	Yes	No
3 ounces Meat/Meat Alternate	Yes	No
3/4 cup Vegetables/Fruits	Yes	No
1 serving of Grains/Breads daily	Yes	No

Do lunch menus for the week meet the weekly minimum for Grains/Breads?

A total of 10 servings of Grains/Breads	
over the week	Yes No

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After you have selected and recorded the foods and portions you plan to serve, check your menus using the questions below.

BREAKFAST

1.	Have you selected the appropriate grade group (or groups) for the students you will be serving?	Yes No
2.	Have you included the required food components and food items in the correct serving sizes?	
	Does each day's breakfast menu include <i>at least</i> :	
	8 ounces of fluid milk as a beverage or on cereal	Yes No
	1/2 cup fruit or vegetable or full-strength fruit or vegetable juice	Yes No
	One serving from each of the Grains/Breads and Meat/Meat Alternate components OR	
	<i>Two servings from either</i> Grains/Breads or Meat/Meat Alternate?	Yes No
LU	JNCH	
1.	Have you selected the appropriate grade group (or groups) for the students you will be serving?	Yes No

2. Have you included the required food components and food items in the correct serving sizes? Are you meeting minimum requirements for each of the grade groups you are serving? (See questions next page.)

IF YOU ARE SERVING GRADES K-6:

Does each day's lunch menu include *at least*...

8 ounces fluid milk as a beverage	Yes	No
2 ounces Meat/Meat Alternate	Yes	No
3/4 cup Vegetables/Fruits	Yes	No
1 serving of Grains/Breads daily	Yes	No

Do lunch menus for the week meet weekly minimum requirements for Grains/Breads and Vegetables/Fruits?

Grains/Breads:	
A total of 12 servings over the week Yes	No

IF YOU ARE SERVING GRADES 7-12:

Does each day's lunch menu include *at least*...

8 ounces fluid milk as a beverage	Yes	No	
2 ounces Meat/Meat Alternate	Yes	No	
1 cup Vegetables/Fruits	Yes	No	
1 serving of Grains/Breads daily	Yes	No	

Do lunch menus for the week meet the weekly minimum for Grains/Breads?

A total of 15 servings of Grains/Breads	
over the week	Yes No

IF YOU ARE USING THE RECOMMENDED (OPTIONAL) GRADE GROUP FOR GRADES K-3:

Does each day's lunch menu include *at least*...

8 ounces fluid milk as a beverage	Yes No
1-1/2 ounces Meat/Meat Alternate	Yes No
3/4 cup Vegetables/Fruits	Yes No
1 serving of Grains/Breads daily	Yes No

Do lunch menus for the week meet the weekly minimum requirement for Grains/Breads?

A total of 10 servings of Grains/Breads	
over the week	Yes No



After you have selected and recorded the foods and portions you plan to serve, check your menus using the questions below.

BREAKFAST

1.	Have you selected the appropriate age/grade group (or groups) for the students you will be serving?	Yes 🗌 No 🗌
2.	Do meals meet nutrient standards when averaged over the school week?	Yes 🗌 No 🗌
3.	Are at least 3 menu items offered daily?	Yes No
4.	Is fluid milk as a beverage offered daily?	Yes No
IL	INCH	
1.	Have you selected the appropriate age/grade group (or groups) for the students you will be serving?	Yes No
2.	Do meals meet nutrient standards when averaged over the school week?	Yes No
3.	Are at least 3 menu items, including an entrée and fluid milk as a beverage, offered daily?	Yes 🗌 No 🗌
4.	Is fluid milk as a beverage offered daily?	Yes No



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CHAPTER 4

CHAPTER 5



Nutrient Analysis: Required for Nutrient-Based; Helpful for Food-Based

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CHAPTER 5



Nutrient Analysis: Required for Nutrient-Based; Helpful for Food-Based



ou have a menu idea, and you're pretty sure it's a winner. You've considered the Dietary Guidelines for Americans, and you've put to good use what you know about pleasing students in your community. You *think* it will meet the nutrition goals. But how can you be sure?

This is where nutrient analysis comes in. In this chapter, we'll look at how to make computerized nutrient analysis a part of your menu planning.

In many school districts, nutrient analysis will be the responsibility of the menu planner at the central office. If you are a manager at the local school level, you will probably not need to do this yourself. However, you may have the opportunity and may find it helpful. Here are some things to keep in mind:

Computerized nutrient analysis is required for NSMP and Assisted NSMP. While it's *not* required for Traditional and Enhanced Food-Based Menu Planning, it can be very helpful.

A computerized nutrient analysis is an important step in planning meals with NSMP and Assisted NSMP. This is because meals are planned around specific nutrient goals rather than food components and meal patterns. In fact, as we've seen in earlier chapters, milk is the only required food with NSMP and Assisted NSMP.

With Food-Based Menu Planning — Traditional and Enhanced — you are *not* required to do computerized nutrient analysis. However, you may decide this is useful, especially for measuring your own progress in meeting nutrient standards. If the nutrient analysis is performed according to the *Nutrient Analysis Protocols*, you can request for your State agency to accept your nutrient analysis. Otherwise, your State agency will do a nutrient analysis during reviews.

Nutrient analysis must be done using software approved by USDA. Approved software performs all of the necessary functions for an accurate analysis.

An important part of any USDA-approved software is what is called the Child Nutrition Database (CN Database). This database is crucial to the software's capability to do the nutrient analysis as well as perform other important functions.

The CN Database includes information on reference foods commonly used in schools, USDA commodity foods, and brand-name processed foods used in schools. It also includes the nutrient analysis of USDA Recipes for School (2006) and links to the Food Buying Guide for Child Nutrition Programs information.

What about foods and recipes *not* in the CN Database? You can add these to your own local database, which you will develop by adding files available with the nutrient information into the computer software.

You can get this software from a variety of sources. For a list of USDA-approved software and how to obtain it, contact your State agency or use the Internet to check the Healthy Meals Resource System Web site. (See Appendix 3 for information on this Web site.)

To be approved, software must meet strict requirements set by USDA. One of these requirements is that the software be easy to use and come with easy-to-follow instructions. In addition, the developer of the software must have a system to update the database whenever a new release of the CN Database is available.

The process for doing nutrient analysis is the same for all menu planning approaches. The only variables are who does the analysis and when.

If you are using NSMP, you will do the analysis yourself. Complete instructions will come with any USDA-approved software you purchase.

If you choose Assisted NSMP, you will have help from an outside consultant or other agency (such as another school district or the State agency) who will do the nutrient analysis and plan menus based on local preferences. Even if you don't do the analysis yourself, you will want to understand it well enough to follow the findings of the reviewing State agency.

If you are working with Traditional or Enhanced Food-Based approaches and you <u>choose</u> to do the computerized nutrient analysis, simply follow the instructions contained in the software and in the *Nutrient Analysis Protocols* manual. State agency representatives will use this software to do a computerized nutrient analysis of your meals during a nutrition review or you may request the State agency to validate your accurately completed nutrient analysis.

Making Nutrient Analysis Part of Your Menu Planning —

Nutrient analysis can go smoothly when you've considered good menu planning techniques and are using one of the USDA-approved software programs. These software programs will analyze both recipes and menus.

To picture a menu planning process that includes nutrient analysis, read through the following nine steps. Then turn to pages 146 through 152 for more details.



Making Nutrient Analysis Part of Your Menu Planning — A Closer Look at What You Will Do



Plan menu on paper.

You will want to plan by the week since there are weekly nutrient requirements. If you are using cycle menus (these are recommended but not required), you will also plan by cycle. (See page 92 for benefits of cycle menus.)



Identify food products not in the Child Nutrition Database (CN Database) or your local database. Obtain nutrition information from processor, enter into computer, and save in your local database.

Built into the software as part of the CN Database will be information on many of the foods you commonly use, both USDA commodities and purchased foods.

If the menu you are planning requires purchased products that are <u>not</u> in the CN Database, you will need to identify them at this stage.

So that you can add these foods to your local database, you will need to obtain required nutrition information from the food processor or distributor. (See Chapter 7 for a standardized form you may find helpful.)

Add this information to your local database. The next time you use these products, the necessary information will already be in your database.



Identify recipes not in the CN Database. Standardize recipes not previously standardized. Add standardized recipes to local database. Do nutrient analysis of standardized recipes.

If you are using one of the *USDA Recipes for School (2006)* the nutrient data will be in the CN Database, already standardized and with nutrient analysis.

However, you are not limited to using USDA quantity recipes. Your USDA-approved software will allow you to add your own recipes to your local database and create new recipes, including those for theme bars and salad bars.

You will do this by following the software directions. You will need to standardize first, then let the computer do the nutrient analysis. (See Chapter 7 for information on how to standardize a recipe.)

You will need to create a new recipe if you plan to make ANY changes in a USDA quantity recipe. This includes, for example, changing ingredients or preparation procedures, or using alternate and optional ingredients. You will also need to create a new recipe for alternate ingredients and variations of USDA school recipes. Check the software to find out which variations are included in the CN database.

For example, USDA Recipe D-12, Beef or Pork Burrito, has an alternate ingredient for Pork Burrito. Nutrient analysis for the first ingrdient in the recipe, Beef Burrito, is part of the CN Database. But you will need to create a *new* recipe for Pork Burrito, analyze the nutrient content, and add it to the local database. Similarly if you add raisins to C-05, Carrot Cake, a new recipe would need to be created to include the additonal raisins.

See page 148 for more details on creating a new recipe. See page 155 for how you will treat theme bars and salad bars as recipes.

Ten Steps for Creating a New Recipe

Your USDA-approved software will have the capabilities to add a recipe to the local database. You will follow the software directions. Regardless of which software you've selected, all of the following steps are needed to add a recipe to the local database.



- 1. Enter recipe category, code number, and name.
- 2. Enter recipe yield or number of servings (for example, "100 servings").
- 3. Enter type of serving (for example, "cups").
- 4. Enter serving size or description (for example, "4-oz. ladle" or "#16 scoop").
- 5. Look at the food ingredients listed in the database. Then select the correct food item and amount that corresponds with the food ingredient in the recipe.
- 6. Enter recipe ingredients and amounts using Yield Factor Method.

The Yield Factor Method requires: (1) each recipe ingredient be entered as "ready to serve" or "cooked"; and (2) the amount of each ingredient be calculated as a yield from the "as purchased" or raw weight, using USDA's Food Buying Guide. For example: 1 lb. dry macaroni "as purchased" = 9.75 cups cooked; 1 lb. raw ground beef "as purchased" = .75 lb. cooked.

- 7. Enter preparation directions, if desired.
- 8. Save the recipe to the local database recipe file.
- 9. Complete a nutrient analysis.

The software will calculate the following for each recipe:

iron

calcium

- calories
- protein
- total fat
- saturated fat
- vitamin A
- vitamin C
- sodiumdietary fiber

cholesterol

carbohydrate

- recipe.
- percentage of calories:
 from carbohydrate
 - from protein
 - from fat
 - from saturated fat
- 10. Print the recipe, preparation instructions, and nutrient analysis. Review the printout against your recipe to ensure no errors were made in data entry.



Enter specific menu planning data. This includes: site identification, date, meal type, cycle, week, grade or age group, nutrients to be analyzed, and total number of reimbursable meals projected to be served (feeding figure).

Site identification: This refers to the school or schools for which the menu is being planned. It may be a single school or a group of schools with the same menu. For example: "Lincoln Elementary School" or "XYZ Unified School District Elementary Schools."

Date: This is the date the menu will be served. It identifies the menu for future reference.

Meal type: Specify lunch or breakfast. There are specific program requirements for each. (You may also see the words "menu type" used along with or in place of "meal type" here.)

Cycle: A cycle is a series of menus that repeats. A cycle may cover 1 to 8 or more weeks, depending on what works for the individual school or groups of schools. Cycles may be planned for a season or for a year. For example: "Fall Cycle, Number 2, Weeks 1-4"; or "Elementary Cycle, Weeks 1-5."

Week: A school week for nutrient analysis purposes is 3 to 7 consecutive days. If there are fewer than 3 consecutive days in a week, the days in that week are combined with the coming or the prior week for analysis. Most menus will be averaged over a 5-day week.

Grade or age group: You will enter the age or grade group that is appropriate for the children you will be serving with this menu. For example, if you were planning lunch for Lincoln Elementary using established grade groups with NSMP, you might enter "K-6."

It's important to select the *correct* age/grade group for your school or schools. The age/grade group is key to identifying which nutrient standard will be used as a yardstick for measuring success.

As we've seen in earlier chapters, there are different established and optional age/grade groups for the various menu planning approaches. (See Chapter 2 for Traditional and Enhanced Food-Based Menu Planning, and Chapter 3 for NSMP and Assisted NSMP.)

In addition, with NSMP and Assisted NSMP you can develop new, customized age groups. When a grade or age group is added, USDAapproved software will automatically adjust the nutrient standard to fit the selected group. **Nutrients to be analyzed:** Your software may offer nutrient analysis of some nutrients and dietary components that are not required. The following *are* required:

- calories
- protein
- total fat
- saturated fat
- vitamin A
- vitamin C

- calcium
- iron
- cholesterol
- sodium
- dietary fiber

Feeding figure: This is the total number of reimbursable meals projected to be served. For example: "500 Breakfasts" or "1,000 Lunches."

Remember: *Only* reimbursable meals are to be included for nutrient analysis. Therefore, projected servings and total feeding figures must *not* include á la carte or adult sales.



Enter data for each menu item (each entrée, side dish, beverage, and milk) and condiment. This data includes: the food code (which identifies the food or menu item), portion size, and forecasts of projected servings.

Food code: The food code is the numbers or letters assigned to each food and menu item in the CN Database or local database. For example: "1082" for 1% low-fat milk; "8020" for corn flakes cereal. You will find the food code in the computer's ingredient file.

Many software systems will also allow the menu planner to enter the name of the food or menu item. Using this name, the software will search for similar foods and allow the menu planner to select the correct item.

Portion size: You will need to specify the portion size for every food item and menu item. The portion size you enter must relate to the portion sizes available for the food or menu item in the nutrient analysis software system. For example:

• 1% low-fat milk, 8 fl. oz. or 1 cup

• corn flakes cereal, 1 oz. (weight) or 3/4 cup

Forecasts of projected servings: For each menu item, you will want to determine the number of servings you expect to produce. This information should be available from historical menu production records, but you can also use other methods to arrive at this figure.

How you will use this information to enter data into your computer will depend on whether you are doing an unweighted (simple) or a weighted analysis. (See page 154. Also see italicized note at bottom of page 152.)



Perform nutrient analysis of menu plan to obtain weekly averages. Check compliance with the nutrient standard.

To do this, you will need to specify the site number, date range, and meal type as follows:

Site number: This refers to the school or group of schools for which the menu is being planned and analyzed. Specify the site number you assigned in Step 4 above (or during an earlier menu planning session).

Date range: Specify the first day of the menu analysis week and the last day. For example: "4/14/08 - 4/18/08."

Meal type: Specify breakfast or lunch. To meet the nutrient standards, a breakfast needs to provide 1/4 of the Recommended Dietary Allowance (RDA) for required nutrients and calories; a lunch needs to provide 1/3 of the RDA for required nutrients and calories.



Evaluate. Make adjustments if needed to achieve the nutrient standard.

If the nutrient standard is not met when the menu is analyzed and averaged over a week, make changes. For example, to help meet the nutrient goal:

- Replace a food on the menu plan.
- Change portion sizes.
- Add a food to the menu plan.
- Modify a recipe, a preparation technique, or both.
- Purchase a different version of the product you originally planned to use — for example, buy a pizza that is lower in fat.

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Print menu plan reports.

You will be printing several reports:

- Nutrient analysis
- Menu
- Nutritional composition of menu items
- Menu production records that can be saved and/or used in production.

The nutrient analysis report will include both of the following: (1) nutrient analysis for each meal with comparison to the nutrient standard for the age/grade group you have selected; and (2) the weekly average compared to the nutrient standard for this selected group.



If possible, provide nutrition information to students, parents, teachers.

You are encouraged to make the nutrient content of meals available for your customers. Choose the best method for your school — printing information on a menu, for example, or in a brochure. See Chapter 8 for additional ideas. If you have many menu choices, you may want to select a few possible combinations to provide to students and parents.

If you would like more detailed information on doing a computerized nutrient analysis, you may want to obtain a copy of Nutrient Analysis Protocols: How to analyze menus for USDA's School Meals Programs, listed in Appendix 3.

Your Nutrient Analysis Won't Be Right If You Use Incorrect Data

Entering the correct data for recipes and menus is important to the success of nutrient analysis. If the wrong foods, the wrong portion sizes, or the wrong recipes are entered, the analysis will not reflect what is planned and offered.



Some common data entry errors include...

- Selecting an incorrect food item from the database.
- Using the incorrect form of a food. For example, entering the food as raw when the item will be served cooked.
- Selecting incorrect portion sizes.
- Not entering condiments, salad dressings, and added fat.
- Not using standardized recipes.
- Leaving ingredients out of a recipe.
- Leaving menu items out of nutrient analysis. For example, omitting a bun for the hamburger.
- Including ála carte and adult meals in the nutrient analysis for reimbursable meals.

What's the Difference Between an Unweighted (Simple) and a Weighted Nutrient Analysis?

As the first chart below shows, an unweighted (simple) analysis is based on a simple average of a menu. It gives the nutrient contribution of each menu item equal importance.

As the second chart below shows, a weighted nutrient analysis gives more weight to choices that students are more likely to select, based on the menu planner's records of what his or her customers have chosen on previous occasions.

UNWEIGHTED (SIMPLE) NUTRIENT ANALYSIS

Item	Number of Servings Planned	Number of Servings for Computation	COMPUTATION	Nutrient Contribution
Pizza	200	100	100 divided by $300 =$	33.3%
Baked Chicken	50	100	100 divided by 300 =	33.3%
Chef's Salad	50	100	100 divided by 300 =	33.3%
Total:	300	300		100 %

WEIGHTED NUTRIENT ANALYSIS

Item	Number of Servings Planned	Number of Servings for Computation	COMPUTATION	Nutrient Contribution
Pizza	200	200	200 divided by 300 =	66.6%
Baked Chicken	50	50	50 divided by $300 =$	16.7%
Chef's Salad	50	50	50 divided by $300 =$	16.7%
Total:	300	300		100 %

If You Serve Both Breakfast and Lunch, Can You Do a Combined Nutrient Analysis?

Yes. Some USDA-approved software is capable of calculating a combined nutrient analysis for breakfast and lunch. This is an option you can select from the list of functions that will appear on your computer screen. This function should only be used with a weighted nutrient analysis for Nutrient-based menu planning.

To tell your computer to do this, follow the directions in the software. If you have completed all of the steps in "Making Nutrient Analysis Part of Your Menu Planning" (pages 146 to 152), you will have entered the necessary data.

How Will You Do Nutrient Analysis for a Theme Bar?

To do a nutrient analysis for a theme bar, you will essentially treat it as a recipe. You will begin by giving it a name (for example, "Potato Theme Bar") and will continue through the various steps for creating and saving a new recipe described on page 148.

As you go through these steps, you will enter such information as: recipe yield (number of servings), serving size, ingredients and amounts, and preparation directions. You will then save the recipe to the local database recipe file and complete the nutrient analysis.

You will need to do this for *each* of your theme bars, including salad bars. If you change the ingredients for a theme bar, you must develop a new recipe.

Theme bar recipes are treated the same as any other menu choice. In other words, they are averaged into the weekly nutrient analysis based on projected servings.

How Does Making Substitutions Affect Requirements for Nutrient Analysis?

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Occasionally, you may need to make substitutions in menus you have planned. Perhaps a vendor has delivered the wrong food, or maybe the food you ordered isn't available.

No matter what the reason, remember: Substitutions *change* the nutrient content, and meals may or may not continue to meet the nutrient standard. This is also important to think about when you find yourself using leftovers.

How does making substitutions or using leftovers affect nutrient analysis? The answer depends largely on timing — how far in advance you know you will be making changes.

For example, when substitutions are needed because of an emergency, it may be impractical to revise menus and redo the analysis, especially if the emergency arises at the end of the week. However, if you know 2 weeks or more in advance, you will have time to do this.

When making substitutions, think in terms of a 2-week window:

If you know 2 weeks or more in advance: You must re-analyze the menu and meet the nutrient standard, incorporating the substituted item or items.

If you know less than 2 weeks in advance: No re-analysis is required. However, in selecting a food to use in making the substitution, try to choose a food that will contribute similar nutrients to the meal.

When making substitutions on a theme bar, the same rules apply.

If you know 2 weeks or more in advance: You must re-analyze the menu and meet the nutrient standard, incorporating the substituted food. In addition, if you plan to make *several* substitutions 2 or more weeks in advance, you should make a new theme bar recipe.

If you know less than 2 weeks in advance: No re-analysis is required. However, in making the substitution, choose a food that will contribute similar nutrients to the meal. Also use this 2-week window as a guide when you are considering incorporating leftovers into a menu:

If you know 2 weeks or more in advance: You must re-analyze the menu and meet the nutrient standard, incorporating the leftover food.

If you know less than 2 weeks in advance: No re-analysis is required. However, be careful to use the leftover food in place of a food that would have contributed similar nutrients to the meal.

In addition, be sure to document substitutions and leftovers. A good way to do this is making notes on the menu production record. (See Chapter 7 for more information on recordkeeping.)

How Will You Do Nutrient Analysis for Field Trip Meals?

Mr. Brown's sixth graders are going on a field trip, and you have been asked to provide lunch for the entire class. How will you do the nutrient analysis for these meals?

You will want to keep in mind the following:

- (1) Menus for field trips should be part of the menu analysis *on the day they are served*. They should be included as a separate menu choice along with the regularly scheduled menu items.
- (2) The 2-week window applies. If you know you will be providing field trip meals 2 or more weeks in advance, you must include them in the nutrient analysis for that day. If you know less than 2 weeks in advance, you are not required to re-analyze the day's menu to include the field trip meals.
- (3) The projected number of servings is the number of students getting the field trip meals in this case, in Mr. Brown's class.
- (4) For calculating the total number of reimbursable meals projected to be served (feeding figure), reimbursable field trip meals count the same as reimbursable meals served on a school campus.

Tip: Create field trip menus that meet the nutrient standard for the age/grade group served so that when combined with the school-based menu, they will have little effect on the total nutrient analysis.


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CHAPTER 5

CHAPTER 6



Quality Meals — Good for Your Customers and Your Staff **CHAPTER 6**

Chapter 6

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CHAPTER 6



Quality Meals – Good for Your Customers *and* Your Staff



That's because the first rule in getting students to accept healthy school meals is to *produce* quality products — breakfasts and lunches that look good, taste good, and are nutritious. This chapter offers some tips on meeting this challenge.

Your ultimate goal, of course, is providing healthy meals to satisfied customers, but chances are you will boost your employees' morale, too. A food service staff that strives for excellence every day can find great satisfaction and pride in serving meals.

Begin by Setting Quality Standards

Achieving excellence starts with defining what "excellent" means.

Work with your employees to set standards for quality, and then look for ways to meet these standards every day. Training will be important. Make sure your employees understand the standards and know how to meet them.

- Set quality standards for food. Set standards not only for taste, but also for appearance, texture, and temperature. In doing this, consider your customers' preferences for example, some people like their pizza crust thicker and chewier than others. Be sure to get feedback from students. Listen to their comments, watch their actions and reactions, and then try to incorporate this feedback as you work to make a more satisfactory product.
- Use proven, standardized recipes and good quality ingredients. Before serving a new item, involve staff in planning the procedures for preparing it. Make sure all new food items are tasted before they are served.

• **Keep quality in mind.** Check daily to be sure top quality is maintained. Post your "standards for excellence" and encourage the staff to read them often.

You will not be able to serve quality meals if your suppliers give you inferior products. Prior to sending out bids or getting price quotations, review potential suppliers to ensure they are as concerned about quality as you are.

- Teach your employees to use good judgment about cooking times and preparation techniques. They'll need to know how to test for top quality by smell, sight, taste, and temperature. Photos of correctly prepared food are good teaching tools.
- Make sure employees understand basic differences between home cooking and institutional cooking. These include, among other things, differences in quantities, temperatures, equipment, and procedures (such as working with pre-cooked portions, and staggering cooking and holding times).
- Emphasize the importance of food safety. Make sure your staff understands that food safety is important at *every* step from purchasing and receiving, to storing, handling, preparing, cooking, and serving.

As you work to ensure quality and safety, you might find helpful these additional materials developed by USDA for school food service professionals: (1) *Serving It Safe*, a comprehensive multi-media training course on food safety; (2) *Choice Plus*, a reference guide to purchasing foods and ingredients; and *Fruits & Vegetables Galore: Helping Kids Eat More*. These are described in more detail in Appendix 3 and are available through the Resource Library on the Team Nutrition Web site at teamnutrition.usda.gov/library.html.

Serve Quality Food

Good food is the key ingredient in keeping customers satisfied and coming back for more.

Throughout this chapter, you will find tips on preparing and serving food in ways that protect and enhance flavor. For starters, here are just a few examples:

- **Carefully select how you will prepare and hold each food.** For example, plan to cook vegetables in batches and avoid holding for more than 15 to 20 minutes before serving. This will help retain flavor, color, and nutrients. Remember, food continues to cook while it's on the serving line.
- **Don't overcook.** Accidents and mistakes happen. But if a food burns or falls short in other ways, don't make the second mistake of serving that food. As we'll see below, overcooking can also cause food to lose nutritional value.

- Always taste before serving. Make sure food has been prepared and seasoned correctly.
- Serve foods at the proper temperature. Serve hot foods hot (135°F and above) and cold foods cold (below 41°F). Proper temperatures are important for food safety as well as taste and appearance.
- Feature freshness! For example, serve salad greens that are crisp and green.
- Serve eye-appealing foods. Like adults, children as well as older students notice and are influenced by how foods look.
- **Think about the big picture.** Offer menu choices that maximize the flavor and appearance of the entire menu.

Choose "Healthy" Preparation Techniques

Consider the merits of various cooking techniques and select carefully. Be careful to retain nutrients during preparation and cooking.



There's no one "right" way to cook a particular food. However, certain techniques can increase your chances of preparing healthy meals — by helping to minimize nutrient loss, for instance, or enhancing flavor without adding a lot of fat.

For example, baking can be used to cook many foods, including meats and fish. When no fat is added, baking is a great low-fat cooking method. Baking on a rack or draining the fat after baking helps make meat, poultry, and fish even lower in fat.

Steam cooking is another no-fat-added method which is versatile and quick. It produces a high quality product without extra fat. It also minimizes nutrient loss. For example, steamed vegetables generally retain more vitamin C than boiled vegetables.

Trim the Fat!

Learn strategies for limiting fat, such as selecting certain oils for cooking and choosing lower fat ingredients.







Fat is an important nutrient and sometimes an essential ingredient in cooking. But too much fat in the diet may cause serious health problems. This is why, in keeping with the Dietary Guidelines for Americans, the nutrient standards for healthy school meals include specific levels for fat.

As we've seen in earlier chapters, these nutrient standards set levels for total fat *and* saturated fat. When menus are averaged over a week:

- No more than 30 percent of calories should come from total fat.
- Less than 10 percent of calories should come from saturated fat.

Starting on page 168, we'll explore some strategies for reducing fat in school meals. We'll begin by looking at the different types of fat, such as *saturated*, *trans*, *monounsaturated*, and *polyunsaturated*; and we'll see which of these are the best choices for low-fat cooking.

You will also find a variety of practical tips, many of them as simple as draining meats after cooking. In addition, there are suggestions for new ways to make old favorites, such as a reduced-fat pie crust.

Pictured here from USDA *Recipes for Schools* (2006) are Fish Scandia, Corn and Green Bean Casserole, and a variety of desserts. Beef Stir-Fry is shown on page 164. For more information on the recipes, see Appendix 3.





Showcase What You Are Serving

Make sure the foods you are serving look good from start to finish.

You may have heard someone say about a meal: "The food may *taste* good, but it sure doesn't *look* good." Let's face it — we all eat with our eyes as well as our palates. Keep this in mind as you plan menus. Put together complimentary foods, pleasing color combinations, and a variety of shapes, tastes, and textures.

Also give thought to what your customers will see as they move through the serving line. For example, group menu choices so students can make decisions easily. Use neatly printed signs that are simple to read and understand. Make sure students don't have to wait to pick up several items grouped at one spot. In addition:

- **Display foods neatly and in a manner that showcases their colors, textures, and shapes.** For example, garnish steamtable pans to increase eye-appeal. Put food neatly onto plates or trays.
- Use pans that fit properly into steamtable wells. Make sure they are not too big, and not too small.
- Use pans and utensils that look good on the serving line. Make sure they are clean and free of unappetizing baked-on foods.
- Use crushed ice to keep cold foods cold. It looks nice, too!

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The rest of this chapter gives you how-to ideas you can use to cook for <u>quality</u> and <u>good health</u>! Here's a quick guide:



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How to Protect the Nutrients in Food

WHAT CAUSES NUTRIENT LOSS AND WHAT CAN <u>YOU</u> DO ABOUT IT?

Water-soluble vitamins such as vitamin C and the B vitamins are easily destroyed by excess water, air, heat, and light. They are also affected by the pH balance of the cooking liquid. Fat-soluble vitamins A, D, E, and K are more stable. No matter how careful you are, food preparation of any kind destroys some nutrients. Excessive losses, however, can be reduced through proper preparation techniques.

To avoid losing nutrients, be careful with...

- ... Water. Soaking food in water dissolves water-soluble vitamins and minerals. Avoid it except when absolutely necessary. If foods, such as vegetables, must be soaked or remain in water during cooking, use as small amount of water as possible and use the leftover cooking liquid in soup or in another product.
- **... Heat.** Heating food causes nutrient loss, especially vitamin C. For example, the vitamin C content of canned peas will differ significantly from that of cooked frozen peas. Frozen peas are higher in vitamin C because heat from the canning process has already destroyed some of the vitamin C in canned peas.
- ... Light. Milk is an excellent source of riboflavin; but if it is allowed to stand open or is exposed to light, considerable destruction of riboflavin can occur. A light-obstructing container, such as a cardboard carton, can help prevent this. If you are using another type of container, be sure to store it away from light.
- **... pH Balance.** Baking soda should <u>not</u> be added to green vegetables to retain color during cooking. It makes the cooking water alkaline, destroying thiamin and vitamin C.
- ... Air. Vitamins A, C, E, K, and the B vitamins thiamin, pyridoxine, biotin, and folate (also called folic acid) are destroyed by exposure to air. To reduce nutrient loss:
 - 1) Cut and cook vegetables in pieces that are as large as possible.
 - 2) Store foods with proper covers.
 - 3) Cook vegetables as soon after cutting as possible.
 - 4) Cook vegetables until "just tender."
 - 5) Prepare food as close to serving time as possible.

How to Protect the Nutrients in Food

WHEN WORKING WITH GRAINS

Health experts encourage Americans to choose whole grains and breads as a major component of a nutritious diet. This is why grains and breads form one of the widest bands of MyPyramid. To provide maximum benefit, they must be prepared correctly. Some tips:

To retain the nutrients in grains, be careful with...

- ... Washing and rinsing. Never wash rice before cooking. Rice is enriched by spraying with vitamins and minerals. As a result, when you wash rice, the enrichment goes right down the drain. Rinsing cooked grains and pastas also causes considerable loss of nutrients and is not recommended.
- **... Toasting.** Browning uncooked rice before adding water can destroy a lot of the thiamin content.

To make your meals more nutritious...

... Substitute whole-wheat flour for part of the white flour in recipes. When introducing whole grains, try starting with 10 percent whole-grain flour or grains and gradually increase the amount over time.

Using part all-purpose flour and part whole-wheat flour is more acceptable in some products than 100-percent whole wheat, although this does not apply to all products. For example, some food service operations have found that children liked a pizza crust made with 1/2 whole-wheat flour and 1/2 white flour, but not a 100-percent whole-wheat crust.

... Make oat flour by grinding oatmeal in a blender or vertical cutter mixer. You can use oat flour with other flours for breading, baking, and thickening sauces.

How to Protect the Nutrients in Food

WHEN COOKING FRUITS AND VEGETABLES

Advances in food technology make it possible to obtain fruits and vegetables in many forms. You can get them fresh, frozen, or canned; whole or pre-cut; bulk or pre-portioned. In any form, fruits and vegetables need to be handled and stored correctly to retain nutrients and ensure food safety.

You might be surprised to learn that value-added produce (fresh cut ready-to-use fruits and vegetables) can be a vehicle for food-borne illness if improperly stored or handled. To help you evaluate a supplier of value-added produce, see Appendix 10 for tips on sanitation, temperature, and dating.

For best results when cooking fruits and vegetables...

- When cooking vegetables, prepare small amounts. Avoid long exposure to heat. Fresh or frozen vegetables can be cooked by several different methods. You can steam, bake, or saute them. Regardless of the cooking method you choose, it's better to prepare small amounts than to cook single large batches. Nutritive value is lost and quality is lowered with long exposure to heat.
- To retain nutrients and bright colors, cook "just until tender." A good way to cook vegetables is using a convection steamer.
- Use carefully timed "batch cooking" to avoid having vegetables held too long on the serving line. A good rule of thumb: The quantity you cook should not exceed the amount you can serve in 15 minutes. This applies to both vegetables served alone and to vegetables used in recipes such as beef or chicken stir-fry.

How to Trim the Fat

A CLOSER LOOK AT FAT AND CHOLESTEROL

Medical experts agree that eating too much fat, especially saturated fat and cholesterol, can take its toll on our health. While it's true that we need some cholesterol, the human body can make its own supply. Having a large amount of saturated fat and cholesterol in our diet is linked to increased blood cholesterol levels and a greater risk of heart disease.

It is also important to pay attention to the amount of *trans* fat in food. *Trans* fats are created when oils are "partially hydrogenated" to turn liquid oils into solid margarine or shortening. Foods that are high in *trans* fat include hard or stick margarine, cakes, cookies, pies, and other fatty foods made with partially hydrogenated (partially hardened) oils. *Trans* fat contributes to elevated blood cholesterol levels and can increase heart disease risk.

As you work to reduce fat in school meals, your first strategy should be to decrease the <u>total</u> amount of fat you use. But keep in mind, reducing saturated fat and *trans* fat is also your goal.

To reduce fat, especially saturated and trans fat...

Be aware of the fat and cholesterol content of foods.

Meat, poultry, fish, milk, cheese, egg yolk, and organ meats are all major sources of cholesterol. Serving less fat from these sources can help lower blood cholesterol as well as reduce total fat and saturated fat intake.

For sure, we *don't* want to stop serving these foods — they contain valuable nutrients. But we can make changes in the *way* we prepare and serve them.

For example, we can use leaner cuts of meat; trim fat and skin from chicken; offer low-fat or fat-free milk; and modify recipes in a variety of ways. You will find suggestions like these in Chapter 4 as well as this chapter.

In addition, in response to a growing interest in leaner diets, lower fat versions of many foods are now available. As you plan your menus, take advantage of opportunities to reduce fat. After all, it's just as easy to make or purchase pizza with low-fat cheese, and it will help you meet nutrition goals for fat!

Be aware of differences in cooking oils. Instead of using a saturated fat — such as butter, solid or "stick" margarine, palm oil, palm kernel oil, or coconut oil — it's better to choose an unsaturated fat, like olive or safflower oil, when possible.

Saturated fats are usually solid at room temperature and are generally of animal origin. However, three vegetable oils — palm, palm kernel, and coconut — also contain a lot of saturated fat.

Unsaturated fats are usually liquid oils at room temperature and are of vegetable origin. Some are what is called "mono-unsaturated" — olive, peanut, and canola oils are examples. Others are "polyunsaturated" — safflower, sunflower, soybean, cottonseed, and corn oils are examples.

Check food labels and ingredient lists for overall fat, saturated fat, and *trans* fat. Choose products that are lower in fat and include less saturated fat and *trans* fat.

You will want to know what type of fat a product contains. Watch out for ingredients that tell you a product may be high in saturated fat or *trans* fat — for example, check for coconut oil, palm oil, cream, cocoa butter, beef fat, poultry fat, lard, or butter.

Better choices for reducing saturated fat and *trans* fat would be products that include unsaturated oils: safflower, corn, soybean, cottonseed, sesame, canola, and olive.

Think about reducing fat at every step!



Using leaner cuts of meat (such as the 95% fat-free turkey ham from USDA pictured at right) is a good way to reduce fat. See pages 170 to 181 for more suggestions.



How to Trim the Fat

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There are lots of ways to be creative when you're cutting back on fat. You've probably already discovered many! Add these ideas to your list if they are not already on it.

- When adding fats to recipes, select unsaturated fats such as liquid oils or soft margarine.
- Make marinades without oil.
- Cook rice, grains, and beans in defatted broth and add herbs, garlic, or onions for more taste.
- Make a low-fat "cream" topping using cottage cheese, yogurt, lemon juice, and fat-free milk. (See recipe next page.)
- Make a "tomato-cream" sauce with low-fat milk or fat-free evaporated milk flavored with a few tablespoons of tomato sauce. (See recipe next page).
- When possible, skin chicken before cooking.
- Drain all meats after cooking.
- De-fat whenever possible. If your school has the ability to quickly chill and reheat foods in a safe manner, allow time to let your stews, soups, and braised dishes cool so that the fats will rise to the top, congeal, and be easy to spoon off.

* * * * * * * * * * * * * * * * * Low-fat "Cream" Topping Low-fat Low-fat Low-fat **Version A** Version **B** Version C Stir until blended: Blend well: Stir until blended: 1 cup low-fat 1 cup plain 1 cup low-fat cottage cheese low-fat yogurt cottage cheese

-			
1 Tbsp. fat-free milk	1 Tbsp. low-fat mayonnaise	1 cup fat-free plain yogurt	
2 Tbsp. lemon juice			

Low-fat "Tomato-Cream" Sauce

Mix together:

1 cup low-fat milk or fat-free evaporated milk

1 Tbsp. cornstarch

3 to 4 Tbsp. tomato sauce

An excellent source of low-fat recipes and ideas is USDA Recipes for Schools (2006). See Appendix 3 for more information.

How to Trim the Fat





Did you know...

- ... you can generally cut the fat in your recipes by 1/4 to 1/3 *without* losing the great taste in baked items?
- ... that chilled, undiluted evaporated fat-free milk can be a great substitute for cream?
- ... that some yeast breads such as French bread and English muffins can be made successfully without fat?

You may also be interested to find out that...

- ... decreasing the fat too much in *rolled* cookies can make a dough that is difficult to roll out. Switching to *soft drop* cookies allows you to cut fat with better results.
- ... you can use fruit purees, such as prune puree or applesauce, in place of up to half the fat in some baked goods.

For best results in reducing total fat and/or saturated fat...

Replace butter and lard with soft margarine or vegetable oil.

Use a non-stick cooking spray on baking pans.

Check ingredient labels and recipes for high-fat foods. When possible, choose similar products without high-fat ingredients.

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Just how little fat can you use and still have great taste?

The examples on the next page will give you a clue.

Simple substitutions can make a big difference.

For example, using low-fat yogurt instead of sour cream reduces the amount of fat by 18 grams per 1/2 cup. See below for this and other examples.

How Little Fat Can You Use... And Still Have Great Taste?

For these baked items:	Minimum fat needed is:
Muffins, Biscuits, Quick Breads	2 Tbsp. per 1 cup flour
Cakes, Soft Drop Cookies	2 Tbsp. per 1 cup flour
Pie Crust	4 Tbsp. per 1 cup flour



Substitutions Can Make A Big Difference

When you replace this	With this	You will lower fat grams by:	You will lower calories by:
Whole milk	Fat-free milk	8	64 per cup
Whole egg, 1	Egg whites, 2	6	47
Cream cheese	Fat-free cream	10	90 per 2 Tbsp.
Ricotta cheese	1% cottage cheese	14	52 per 1/2 cup
Cheddar cheese	Mozzarella, skim	4	42 per oz.
Heavy cream	Half and half	32	15 per Tbsp.
Sour cream	Low-fat yogurt	18	172 per 1/2 cup
Mayonnaise	Reduced-fat mayonnaise	6	60 per Tbsp.
Baking chocolate (1 oz.)	Cocoa (3 Tbsp.)	7	63 per Tbsp.
Evaporated milk	Evaporated fat-free milk	2.5	40 per 2 Tbsp.

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How to Trim the Fat

HOW TO USE LESS FAT WHEN SAUTÉING AND STIR-FRYING

Brush the pan with oil just to coat it or use a nonstick spray made from vegetable oil. Typically, using a vegetable oil spray will add less than 10 fat calories to a pan of sauteed vegetables. In contrast, 2 tablespoons of oil add an extra 240 fat calories.

When stir-frying, keep the oil in your kettle very hot. Vegetables soak up cold oil more quickly than hot oil.

Cut back on buttering vegetables by using one part margarine and one part lemon juice.

Experiment with ways to add flavor and moisture without adding fat. Marinades are a good way to do this. Also try using chicken or meat broth, concentrated fruit juice, or perhaps fresh fruit or vegetable juice.

CUT BACK ON DEEP-FAT COOKING ...AND USE LESS FAT

Use deep-fat frying infrequently since it increases the fat content of food. But when you do deep fry, it's best to use unsaturated vegetable fat. Because this type of fat has a higher smoke point, it can be used at a higher temperature, resulting in less fat absorption. Canola oil, for example, works well for deep-fat cooking.

Here are some additional tips to reduce fat absorption:

- **1.** Use a deep pot or fryer and make sure it is only half full of oil. Fat expands when heated and frequently boils up or foams when foods are added.
- **2.** Heat the oil to the highest recommended temperature for the food being fried. This is important because when food is added, it cools down the oil, and more fat is absorbed. See page 176 for recommended temperatures for some common foods.
- **3.** Do not overload. Overloading a fryer may also drop the temperature and result in excessive grease absorption. Follow product directions for the quantity to fry in a batch.

- **4.** Allow the oil to reheat between batches. In addition, be sure your automatic thermostats are working correctly.
- 5. Add dry foods to the fryer. This will help prevent spatter and foam.
- **6. Gently shake the basket before taking it out of the fryer.** This will help remove excess fat.
- **7. Drain food on absorbent paper over racks.** Change the paper frequently because fat-soaked paper will not continue to absorb excess fat.
- 8. Strain the fat to remove foreign materials. Foreign materials can lower its smoke point.

To Minimize Fat Absorption When Deep-Fat Frying, Make Sure the Temperature is High Enough

FOR EXAMPLE:

For these foods	The recommended temperature range (F) is:
Uncooked chicken, fish, pre-cooked breaded chicken	350° to 360°
Precooked shrimp, croquettes, tempura, fritters	375° to 385°
French-fried potatoes, onion rings	385° to 395°
Potato and tortilla chips	395° to 400°

How to Trim the Fat



It's smart to cut back on fat. But exactly how can you do this? The examples below illustrate some successful ways. On the left you will find the name of a common food. Thirteen are listed alphabetically, from buttered bread to sour cream. On the right are smart choices you might make when preparing or serving that particular food.

WHAT TO DO WITH THIS FOOD?	SOME SMART CHOICES FOR REDUCING FAT INCLUDE
Buttered Bread	Butter bread lightly with <i>whipped</i> butter.
	(If you are using USDA commodity butter, allow the butter to soften at room temperature. Use a wire whip or paddle on mixer to whip until about double in size.)
	Replace butter with jam or jelly.
Buttered Vegetables	Steam vegetables using no butter.
	Use half the amount of butter.
	Use crumb or herb topping (start by combining 2 tablespoons chopped parsley, 4 teaspoons finely grated lemon rind, and 1 clove of peeled, minced garlic).
Cake Mixes	Substitute low-fat yogurt, applesauce, or prune/plum puree for some of the oil.
	Use two egg whites in place of each whole egg.
Cheese	Purchase lower fat brand.
	Serve cheese less often.
	Mix part-skim mozzarella with regular cheese.

EXAMPLES continued

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WHAT TO DO WITH THIS FOOD?	SOME SMART CHOICES FOR REDUCING FAT INCLUDE	
Chicken Nuggets	Purchase lower fat brand.	
	Bake instead of fry, or drain after frying and pat with paper towels.	
	Serve less often.	
Chicken Patties	Purchase lower fat brand.	
	Purchase non-breaded chicken cutlets.	
	Bake instead of fry, or drain after frying and pat with paper towels.	
Fish	Bake instead of fry.	
	• Offer catsup or salsa as a condiment in place of tartar sauce.	
	Mix tartar sauce with plain low-fat yogurt.	
	Use individual condiments in a small quantity as an optional item.	
French Fries	Bake instead of fry.	
	Select brands prepared in vegetable shortening or oil.	
	Make your own cut-up potatoes and bake with little or no oil. Season with garlic powder, onion powder, and a small amount of salt and pepper.	
	Look for opportunities to offer lower fat alternatives, such as baked potatoes.	
Hot Dog	Consider a chicken or turkey hot dog.	
	Check the fat grams on the label.	
	Consider a part-soy product.	
	Serve less often.	

EXAMPLES continued

WHAT TO DO WITH THIS FOOD?	SOME SMART CHOICES FOR REDUCING FAT INCLUDE	
Milk	Replace whole milk or reduced-fat (2%) milk in puddings, soups, and baked products with fat-free milk, low-fat (1%) milk, or reconstituted fat-free dry milk.	
Pizza	Select pizza made with part-skim mozzarella cheese.	
	Select pizza made with reduced-fat cheddar cheese or with a blend of reduced-fat cheddar cheese mixed with part-skim mozzarella.	
	 Select vegetable-topped pizza. 	
	Select turkey-topped pizza.	
Salad Dressing	Keep in mind that most ladles on salad bars hold at least 2 tablespoons of dressing. One tablespoon of regular salad dressing typically contains 5 to 11 grams of fat or 45 to 99 calories. Since you can't control the amount of dressing a student puts on a salad, it is important to offer a reduced-fat salad dressing. To do this you might	
	Use less oil than recipe suggests.	
	Use ranch-style dressing with low-fat yogurt substituted for half the mayonnaise.	
	Use reduced-calorie (light) mayonnaise-type dressing.	
	Purchase acceptable-tasting fat-free dressings.	
	Substitute plain low-fat yogurt for part or all of the mayonnaise in creamy salad dressings.	
Sour Cream	Replace with low-fat or fat-free sour cream, plain low-fat or fat-free yogurt, blender-whipped low-fat or fat-free cottage cheese, or 1% buttermilk.	

How to Trim the Fat

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You are reading through a new recipe and you come upon an ingredient that might contribute more fat calories than you want. Your challenge is to use that ingredient in a different way, make adjustments, or perhaps find a substitute.

YOUR CHALLENGE IS	SOME POSSIBLE SOLUTIONS ARE		
Ground beef or pork is in the recipe.	Drain meat well after browning.		
	Replace half of the meat with lean ground turkey, drained after browning.		
	Replace 1/4 of the meat with mashed beans. For example, canned USDA Great Northern, pinto, or red beans are great in tacos. Use 1/4 cup of beans as equivalent to 1 ounce of meat if using Traditional or Enhanced Food-Based Menu Planning. (The 1-ounce equivalent does not apply to NSMP and Assisted NSMP.)		
	If possible, buy leaner ground meat.		
	■ If using Traditional or Enhanced Food-Based Menu Planning, use only as much Meat/Meat Alternate as needed to meet the meal pattern requirement. (This requirement does not apply to NSMP and Assisted NSMP.)		
Fat is in the recipe.	Reduce the amount of oil, butter, or shortening used.		
	Eliminate butter, oil, or shortening completely when possible. Replace with fruit purees, when appropriate.		
	For overall health, be sure the type of oil used is unsaturated.		

YOUR CHALLENGE IS	SOME POSSIBLE SOLUTIONS ARE	
Mayonnaise is in the recipe.	■ Use 1/2 to 2/3 of the amount of mayonnaise specified.	
	Replace 1/2 of the mayonnaise with plain low-fat or fat-free yogurt.	
	Use reduced-fat mayonnaise.	
Cheddar cheese is in the recipe.	Use only as much cheese as needed to meet the Meat/Meat Alternate requirement for Traditional or Enhanced Food-Based Menu Planning. (This requirement does not apply to NSMP and Assisted NSMP.)	
	Instead of all cheddar, use 1/2 or less cheddar and more part-skim mozzarella.	
	Use lower fat cheese.	
American cheese is in the recipe.	Use only as much cheese as needed to meet the Meat/Meat Alternate requirement. (This requirement applies only to Food-Based Menu Planning, not to NSMP and Assisted NSMP.)	
	Use lower fat cheese.	
Recipe calls for roux (flour and fat thickener).	Replace part or all of the roux with cornstarch slurry (cornstarch and water) or flour and water, using an amount of cornstarch equal to 1/2 of flour called for, and enough cold water to dissolve cornstarch.	
Recipe calls for frying food.	Bake food.	

How to Lower Salt and Sodium

TIPS FOR USING MODERATE AMOUNTS OF SALT AND SODIUM

- 1. Select foods and recipes carefully. Identify and choose low-sodium foods, especially when purchasing processed products. Look for recipes that contain only a small amount of high-sodium ingredients.
- **2.** Add salt only if necessary. If some of the ingredients in a recipe already contain salt canned soup, canned vegetables, or cheese, for example you may not need to add salt at all.
- **3. Gradually reduce the amount of salt in recipes.** For example, instead of eliminating salt completely, try decreasing it by 1/4 at first, then gradually by 1/2. This will probably be more satisfactory to customers.
- **4.** Add less salt to water when cooking pasta, rice, and hot cereal. Use 1 tablespoon salt per gallon of water. This provides flavor but is still low in sodium.
- **5.** Try using salt-free or lower salt seasoning mixes. You can make these yourself or purchase them. Put the mix in marked shakers and use on the serving line for self-serve.
- 6. Use fresh or fresh-frozen meats in recipes instead of canned meats whenever possible.
- **7. Enhance flavor with spices and herbs.** When you are reducing fat or salt, you may need to adjust other seasonings. See pages 183 and 184 for some spice blend recipes and other suggestions.

How to Lower Salt and Sodium



TIPS FOR SEASONING VEGETABLES

Seasoning vegetables with herbs and spices reduces the need for added salt. Try the suggestions below to enhance the natural flavors of vegetables.

USE	TO SEASON	
Allspice	Winter squash, sweet potatoes	
Basil	Cabbage, carrots, green peas, spinach, tomatoes	
Caraway	Beets, cabbage, cauliflower, green beans, wax beans, zucchini	
Cardamom	Winter squash, sweet potatoes	
Celery seed	Cabbage, carrots, cauliflower, celery, sauerkraut, tomatoes	
Chili powder	Corn, tomatoes	
Cinnamon	Beets, carrots, sweet potatoes, onions, tomatoes	
Curry	Cabbage, celery, lima beans	
Dill seed	Beets, cabbage, carrots, cauliflower, celery, green beans, green peas, wax beans	
Garlic powder	Green leafy vegetables, broccoli, cauliflower	
Lemon juice	Green leafy vegetables, broccoli, cauliflower	
Mace	Cauliflower	
Marjoram	Broccoli, carrots, cauliflower, green peas, spinach, zucchini	
Mint	Carrots, green peas, spinach	
Mustard seed	Cabbage	
Nutmeg	Celery, spinach, winter squash	

USE	TO SEASON
Onion powder	Cabbage, green beans
Oregano	Green peas, tomatoes, zucchini
Parsley	Tomatoes, corn
Rosemary	Cauliflower, spinach, turnips
Sage	Green beans, onions, tomatoes, wax beans
Tarragon	Cauliflower
Thyme	Carrots, celery

How to Lower Salt and Sodium

TRY THESE SPICY BLENDS!

Instead of offering salt on your cafeteria tables, try different spice blends. You can put them in shakers, just as you would salt. Many salt-free seasonings are available commercially, but you can also make your own. A few spice blend combinations are listed below.

The directions are the same for each: Combine all ingredients in amounts listed and blend thoroughly. If the ingredients stick together when you put the blend in salt shakers, add a few grains of uncooked rice.

Spicy Flavor Blend

2 Tbsp. savory, crushed 1 Tbsp. powdered mustard 2-1/2 tsp. onion powder 1-1/2 tsp. curry powder 1-1/4 tsp. ground cumin 1/2 tsp. garlic powder

Herbed Seasoning Blend

2 Tbsp. dillweed or basil leaves, crushed
2 Tbsp. onion powder
1 tsp. oregano leaves, crushed
1 tsp. celery seed
1/4 tsp. grated lemon peel (dried)
Dash black pepper

All-Purpose Spice Blend

5 tsp. onion powder 2-1/2 tsp. garlic powder 2-1/2 tsp. paprika 2-1/2 tsp. powdered mustard 1-1/4 tsp. thyme leaves, crushed 1/2 tsp. white pepper 1/4 tsp. celery seed

All Seasons Seasoning Blend

tsp. basil
 tsp. marjoram
 tsp. thyme leaves, crushed
 tsp. oregano leaves, crushed

How to Equip Your Kitchen

TIPS ON CHOOSING AND USING EQUIPMENT FOR HEALTHY SCHOOL MEALS

As you work to plan and prepare healthy meals, you will want to select equipment carefully. For example, instead of using a deep-fat fryer to make French fries, use the oven. Oven-baked French fries are much lower in fat.

Your current equipment is probably versatile enough to support the kinds of changes you will be making as you modify recipes to meet the nutrition goals. Especially helpful will be equipment, like steamers, that allow you to cook foods with little or no fat.

Here's a list of some of the equipment that can help you prepare healthy meals. You may have found other equipment to be helpful as well.

- **Tilting skillets:** These are convenient and fast for braising, pan-frying, sautéing, steaming, boiling, and pot-roasting.
- **Steam-jacketed kettles:** Faster and simpler to control than range-top cookers, these are good for soups, stocks, sauces, stews, vegetables, and more. When steam-jacketed kettles are used properly, fewer nutrients are lost due to heat and time.
- Pressure steamers or pressureless convection steamers: Steamers provide the best vitamin retention because they cook more quickly. They are great for batch-cooking in high-volume school food service. Rice, pastas, and vegetables can be cooked in steamers.
- **Convection or conventional ovens:** You can use these for baking, roasting, and broiling, all of which are low-fat cooking techniques. When fats in meat are heated at high temperatures, this changes the physical properties of fat from a solid to a liquid, so the fat drains away.
- **Combi ovens:** These will reheat prepared food without drying it out. They will also roast meats with little shrinkage. They can heat by steam, dry heat, or steam/dry heat.
- Microwave ovens: When foods are prepared in a microwave oven, they retain more nutrients than foods that are boiled, baked, or even steamed. This is especially helpful in batch-cooking vegetables. (Microwave ovens are becoming more popular and affordable in school food service.)
- Cook/holding cabinet: No food should be held in a warming unit longer than 30 minutes if you want to serve a quality product and retain nutrients. You will have two problems unhappy customers and fewer nutrients!



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CHAPTER 6





Menu Planning Records

LOWFAT

Chapter 7

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CHAPTER 7



Menu Planning Records



G ood recordkeeping is part of any successful food service operation. A tool like the production record helps you plan from day to day as well as communicate your plans to your staff. How much food needs to be prepared for a particular day's lunch or breakfast? The production record tells you at a glance.

Good records also provide a valuable written history for future reference. They help you spot trends, evaluate what works best with your customers, and decide what changes need to be made. In addition, during State reviews your records demonstrate that your meals comply with program requirements.

In this chapter, we'll focus primarily on production records, which, as you know, keep track of a lot more than food quantities.

We'll also look at standardized recipes — why it makes sense to use them, how they help ensure quality, and what they contribute to good planning and recordkeeping. Finally, we'll look at what kind of records you will need for processed foods. We'll see what kind of information you will want to have on hand and how you might go about requesting nutrient data from food manufacturers if you don't already have it.

On page 206, you will find a standardized form developed by USDA to help school districts obtain nutrition information from manufacturers. You may want to copy and use this when you need information from a manufacturer or vendor. In addition, you might want to attach it to the bid package you send out when purchasing food.



Production Records

Production records vary in format, but any successful record accomplishes two things. First, *it gives the staff information* — what foods and recipes to use, for example, and what portion sizes to serve. Second, *it enables staff to record information*, such as actual quantities prepared and numbers served.

Starting on page 196 are some *sample* production record formats. The first set is for Food-Based Menu Planning approaches. The second set is for Nutrient-Based approaches. In each set, you will find:

- *Blank forms showing suggested formats*. You may want to select one of these to copy and use in your own operation. Or, you might get ideas for designing your own form.
- *Completed sample forms*. These illustrate how a form might look when completed for a typical meal.

As you look over the samples for Food-Based and Nutrient-Based planning approaches, you will see they provide much of the same information. The variations in format and wording reflect the basic differences between the two approaches. (As we've seen in Chapters 2 and 3, Food-Based approaches use meal patterns and specific food components as planning tools, while Nutrient-Based approaches use computerized nutrient analysis to plan their menus.)

Be sure to look carefully at the *heading* on each sample form.

- *For Food-Based Menu Planning*, you will find Sample Format #1 (which can be used for both Traditional and Enhanced approaches) and a more specialized Sample Format #2. Note that there are *two* separate versions of the second format Sample Format #2 is for Traditional, while #2A is for Enhanced.
- *For Nutrient-Based Menu Planning*, you will find Sample Format #3 and Sample Format #4.

You may use any form you wish as long as it includes certain key items. These items are summarized and then explained in more detail on the following pages.

What's needed on a production record for Food-Based Menu Planning?

A production record for Traditional or Enhanced Food-Based Menu Planning should indicate the site and meal date, the menu type (breakfast or lunch), and...

- Food components (Meat/Meat Alternate, etc.) and other items, including condiments.
- Recipe or food product used (note if a USDA recipe).
- Planned/projected number of portions and serving sizes for each menu item for each age/grade group.
- Planned/projected number of portions and serving sizes for each menu item for adults and á la carte.
- Total amount of each food item prepared (for example, number of servings, pounds, cans).
- Actual number of reimbursable meals served (indicate this information for <u>each</u> age/grade group).
- Actual number of nonreimbursable meals served (such as to adults or as á la carte sales).
- Substitutions and leftovers .

What's needed on a production record for Nutrient-Based Menu Planning?

A production record for Nutrient-Based Menu Planning should indicate the site and meal date, the menu type (breakfast or lunch), and...

- Menu items used and their forms (including condiments).
- Recipes and/or food product used (note if a USDA recipe).
- Planned/projected number of portions and serving sizes for each menu item for each age/grade group.
- Projected number of portions and serving sizes for each menu item for adults and á la carte sales.
- Projected number of student servings for each menu item.
- Projected number of total servings.
- Total amount of food prepared (for example, the number of servings, cans, etc.).
- Actual number of reimbursable meals served or feeding figure (indicate this information for each age/grade group).
- Actual number of nonreimbursable meals served (such as to adults or as á la carte sales).
- Substitutions and leftovers.
What additional information might you include on your production record?

You can tailor the production record to your own operation, including additional information if you wish. On some of the sample formats, for example, you will see "person responsible." Be sure to include *at least* the items listed on page 189.

When is the production record completed?

Usually, the menu planner completes the first part of the production record in advance. The staff completes the remaining sections on the day the breakfast or lunch is served.

COMPLETING A PRODUCTION RECORD

Here are more details on what is needed for production records. You will see a number of differences noted for Food-Based and Nutrient-Based planning, but in general, similar information is needed for both approaches.

Menu items (or food items) used and their forms: Listing this information is the first step in effectively communicating the menu to the staff. Listing all food items, including condiments, is important for future monitoring by the State agency.

Recipes and/or products: Indicate specific recipes and food products to be used. It is critical to specify exact recipes and products. If the preparer or server uses a different recipe or product than indicated by the menu planner, the food provided to students may not necessarily meet the nutrient standard or meal requirements as planned.

As shown on the sample formats, you will list: (1) the recipe number if it is a USDA school recipe; (2) the name of the food and its form (such as shredded lettuce). For processed foods, list brand name and code number.

Age or grade group(s): Identify the age or grade group being served. If a menu serves more than one age or grade group at a site, you may use one production record to show this, but notations for each age/grade group must be clear. Adjusted portion sizes for age or grade groups specified must be shown for menu items, recipes, and products.

Portions or serving sizes: This information is important to ensure that the correct portion sizes are served as well as planned and prepared. Without this guide on the production sheet, the server may have no way of knowing the correct portion size.

Portion size served must be the same as planned. If portion size is adjusted for age, a separate line should be used to indicate this. (USDA *Recipes for Schools (2006)* includes helpful information on the portion size for various serving utensils. See Appendix 3.) **Total projected servings:** The menu planner also must forecast, or predict, the approximate number of servings needed of each menu item. Projecting the number of servings is the first step in determining how much food to order, how much time to allot for preparation, and which equipment to use.

In menus that offer several different selections or with Offer versus Serve, it will not be necessary to plan and prepare portions of each menu item for each person. Past production records, which must be kept on file, can help accurately forecast future production and menu planning figures for all menu planning options.

Amount of food (or purchase units) used: Site staff must keep records to verify that the planned menu was actually prepared and served. Staff record this information in a way that is appropriate for the food item. On the sample sheets, for example, you will see: 220 servings of Salisbury Steak, 76-1/4 pounds of Chicken Nuggets, and 20 pans of Cherry Cobbler.

Actual servings: At the end of service, site staff must record the number of servings of each item that were actually served to students, to adults, and as á la carte sales.

Under Nutrient-Based Menu Planning, the information on actual student servings should be available during the menu planning and adjustment process. Future menu cycles should reflect any significant differences between the projected servings and the actual servings.

Under Food-Based Menu Planning, the information retrieved from the menu production records will be required during the State review for compliance with the nutrition goals.

Leftovers: Once a meal is served, site staff record leftovers on the production record. It is highly recommended to indicate whether leftovers are to be frozen for later use or how the leftovers will be used. Tracking the source of leftovers is important.

Use of leftovers and substitutions: For Nutrient-Based Menu Planning, menu planners record use of leftovers or substitutions.

Standardized Recipes

A standardized recipe is one that has been tried, adapted, and retried several times for use by a given food service operation and has been found to: *produce the same good results and yield every time the exact procedures, the same type of equipment and the same quantity and quality of ingredients are used*.

What are the advantages of standardized recipes?

1. Standardized recipes help ensure product quality.

- They provide consistently high quality food items.
- They yield the same quantity of product each time.
- They provide the same size and number of portions each time.
- 2. Menu planning can be more consistent because:
 - You can accurately predict the number of portions from each recipe.
 - Predictable yield will help eliminate excessive amounts of leftovers and substitutions.

3. Costs are easier to control.

- Purchasing is more accurate because recipes specify exact amount of ingredients.
- Managing inventory and storage is easier because ingredients use is predictable.

4. When the same good results can be produced time after time:

- Food service workers have more confidence in what they are doing.
- Managers can be sure the nutrient analysis of a recipe will be accurate as long as ingredients and preparation methods remain the same.
- Students will be happier because food quality will be consistent.

What are some good sources of standardized recipes?

The USDA Recipes for Schools (2006) materials contain standardized recipes for school meals. You will find more information on these in Appendix 3.



Are standardized recipes important for both Food-Based and Nutrient-Based Menu Planning approaches?

Standardized recipes are an important part of any well-managed food service operation. For Food-Based Menu Planning, standardized recipes are essential to ensure that food is of top quality and that the planned food serving sizes are provided to students. In addition, as we saw in Chapter 2, when State agency representatives analyze menus to check for compliance with nutrition goals, they will need to know which recipes were used and have copies of those recipes supplied to them. Using standardized recipes ensures that the nutrient analysis calculated by the State agency ccurately reflects how well the school is performing in meeting nutrient standards.

For Nutrient-Based Menu Planning, standardized recipes are *required* to achieve food quality and an accurate and valid nutrient analysis.

What kind of information should be included on a standardized recipe form?

If you are standardizing your own recipe, or modifying an already standardized recipe such as from USDA, you will want to keep careful records. The sample form on page 205 may be helpful; however, you may use any form you wish. The following information should be completed on the form:

- 1) Yield: Include serving size and number of servings.
- 2) *All ingredients*: Include form (such as fresh, frozen, or canned); packing medium (such as canned in juice or light syrup, frozen with added sugar or plain), and fat content (such as "20% fat ground beef" or "ground pork, no more than 30% fat).
- 3) Correct measures, weights, and/or pack size.
- 4) Preparation procedures.

Foods of minimal nutritional value that are part of a menu item (meaning they are ingredients used in preparing this item) must be included in the nutrient analysis. Therefore, they should be included on the standardized recipe form. (If foods of minimal nutritional value are served alone, they should not be included in the nutrient analysis.)

For which menu items will you need to keep recipes?

Recipes will be needed for any menu item indicated on production records that contains more than one ingredient, such as Beef Stir-Fry, seasoned vegetables, and sandwiches.

Processed Foods

No matter which menu planning approach you choose, you must keep records of processed foods used in meals. How will you get the information you need?

If you are using Nutrient-Based Menu Planning...

First check the Child Nutrition Database to see if the item is included there. If it is not, you will need to request nutrient data from a source such as the food manufacturer or food distributor or broker. On page 206, you will find a standardized form you may want to use for this purpose.

If you are using Traditional or Enhanced Food-Based Planning...

You will need either: (1) a Child Nutrition Label; or (2) a letter from the manufacturer which states the product and the food components to be credited to that product. (For more information on Child Nutrition Labels, see Appendix 6.)

If you wish to obtain the nutrient data of products for your own planning purposes or for the State nutrition review, you can request this information from a source such as the food manufacturer or distributor or broker. See page 206 for a standardized form you may want to use for this purpose.

Here's a quick guide to the rest of this chapter:

1. Production Records for Food-Based Menu Planning

Sample Format #1: Traditional or Enhanced	Page 196
Sample Format #2: Traditional only	Page 197
Sample Format #2A: Enhanced only	Page 198
EXAMPLE: Traditional or Enhanced Food-Based Menu Planning (Completed Sample Format #1)	Page 199
EXAMPLE: Enhanced Food-Based Menu Planning (Completed Sample Format #2A)	Page 200

2. Production Records for Nutrient-Based Menu Planning

Sample Format #3: Nutrient-Based (Regular or Assisted)	Page 201
Sample Format #4: Nutrient-Based (Regular or Assisted)	Page 202
EXAMPLE: Completed Sample Format #3:	Page 203
EXAMPLE: Completed Sample Format #4:	Page 204

3. Standardized Recipe Form

Recipe Name:		Page	205
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4. Form for Requesting Nutrient Data from Manufacturers

Manufacturers' Data Submission Form	Page 206
Side 1: To be completed by manufacturer	U
Side 2: Instructions (for manufacturer) on	
filling out this form	

• •		•	• •	• •			 		 	· · · · ·		 		
•				•	Amount Leftover									
•				•	Adult Servings	ıgs								
•				•	A la carte Servings	# of Servin		 						
NU				•	Student Servings	Actua								
W				•	Amount of	(lb. or qty.)								
•				•	Total Servings	- sb								
•				•	Adult/A la carte	ted # of Servin								
••	• • • •	•	••	e. e.	Student Servings	Projec								
	ord		Meal Date	Portion Size*	(#/wt./qty.)									
	Rec			Actual number Actual number Ise separate line if ac od Buying Guide or	Grade	Group								
	ction Sreakfast	al Date			Person	Responsible								
	rodu anced) E	Ŵ		is planned. on USDA F	Recipe	(name or #)								
Sample Format #1	Food-Based P (Traditional or Enho	Site	Planned number of student me Planned number of adult med	* Portion size: Must be same a ** Amount of food used: Based	Food Item Used	and Form								

Chapter 7

IN THE REAL PRODUCTION OF THE REAL PRODUCTION

Sample Format #2			
Food-Based Production Record (Traditional only)	Sil Ma	eal Date	to be Served:
Menu	- S - S - S - A	tudents (K-3) tudents (4-12) tudents (7-12 a dults/A la car	opt.)
	Ac - S - S - S - S - A	tudents (K-3) _ tudents (K-3) _ tudents (4-12) tudents (7-12 a dults/A la car	b erved:
Food Items Served Purchase Units Used	Serving Sizes	How Many	Leftovers/

Food Items Served	Amount prepared	Serving Sizes	How Many Servings?	Lettovers/ Substitutions
Meat/Meat Alternate:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Vegetable/Fruit:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Vegetable/Fruit:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Vegetable/Fruit:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Grains/Breads:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Grains/Breads:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Condiments/Dressing:		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Milk:				
2%		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
1%		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte: 	
Fat-free (Skim)		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	
Chocolate%		K-3: 4-12: 7-12 opt: Adult/A la carte:	K-3: 4-12: 7-12 opt: Adult/A la carte:	

Sample Forma	it #2A				
Food-Based	Productio	n Recor	Site		
(Enhanced Food	-Based Menu	Plannina)	Med	al Date	
	MENU		 Plar Stu Stu Stu Actu Stu Stu Stu Stu Stu Stu Stu Stu Stu 	udents (K-6) udents (K-6) udents (K-3 op lults/A la carte udents (K-6) udents (K-6) udents (K-3 op lults/A la carte	to be Served: t.) erved: t.) t.)
Food Items Served	Purchase Units Used Amount prepared	Serving Sizes	How Man Grades	y Servings? Adult/A la carte	Leftovers/ Substitutions
Meat/Meat Alternate:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Vegetable/Fruit:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Vegetable/Fruit:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Vegetable/Fruit:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Grains/Breads:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Grains/Breads:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Condiments/Dressing:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
Milk: 2%		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		
1%		K-6: 7-12: K-3 opt:	K-6: 4-12: K-3 opt:		
Fat-free(Skim)		K-6: 7-12: K-3 opt:	K-6: 4-12: K-3 opt:		
Chocolate%		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:		

Menu Planning Records

Samp	le Form	at #1			•••	•	•	. ~	ÁENÚ.	•	•	• • •
Par P	odi	Dction Breakfast		ord		Salisbur -or- Chic Baked P	y Steak 3ken Nu _{ otato -01	& WW R ggets, BBG r- Fresh V	.oll Sauce eggies		2 oz M/ 1 serv (3/8 c V	'IMA 3/B EG
enta	ry /	Meal Date	May	14, 2008	•	Cherry (Ranch I Cobbler	Dressing			1 / S で 日	RITTU BITTU
le as ed oi	plannec n USDA	A.Use separate A Food Buying	Guide o	djusted for aç r USDA recip	e e e	Milk, Va	riety				1/2 ser 1/2 ser 8 fl oz]	v G/B Milk
					•	•	•	•	•	•	•	•
or P. (nam	cipe roduct e or #)	Person Responsible	Grade Group	Portion Size* (#/wt./qty.)	Student Servings Pro	Adult A la carte iected # of Se	Total Servings ervings	Amount of Food Used** (Ib. or qty.)	Student Servings Actu	A la carte Servings al # of Servii	Adult Servings ngs	Amount Leftover
수쪞	23 and X	Sue Yolanda	К-6	1 each 5 ea/4 oz	200 300	a 50	220 305	220 serv 76-1/4 lb	195 290		10 5	15 serv 2.5 lb
Ö	φ	Akiko Akiko Akiko Akiko Akiko	К-6	1 each 1/8 c 1/8 c 1/8 c 25 serv/pan 1 square	290 240 245 245 240 490	10 5 10 10	300 250 250 250 250	300 each 12.5 lb 13 lb 11 lb 20 pans	255 235 235 235 235 235 235 235 235 235		10 13 ت ت ت ت 1	40 each 1/2 lb 1/2 lb 1 lb
Ŕ	rand X	Yolanda	Ю-Я	1 each	200	80	520	12 lb 6 oz	195		10	15 each
щ	rand Z	Akiko	К-6	portion	300	ß	305	305 each	290		വ	10 each
BI	and Q	Akiko		portion pack/lea	340	10	350	350 each	300		10	40 each
		Sue	К-6	1/2 pint	190 100 40 150	10	200 100 50 150	200 1/2 pts 100 50 150	190 100 45 150		വ	5 (1/2 pt) 5
	_		_	_		_						

TERNALDER FALSTER FALST

Completed Sample Format #2A

Food-Based Production Record

Site Summitville Elementary

(Enhanced Food-Based	l Menu Pla	nning)	Meal Date <u>May 14, s</u>	3008				
Men	U	• • • •	 Planned Number to be Students (K-6) Students (7-12) 	Served: 500				
Salisbury Steak & WW Ro -or- Chicken Nuggets, BBQ	l 2 or Sauce 1 se	z M/MA erv G/B	 Students (K-3 opt.) _ 					
Baked Potato -or- Fresh Ve Low-fat Ranch Dressing	ggies 3/8	c VEG	 Adults/A la carte Actual Number Served 	<u>&5</u> d:				
Cherry Cobbler	1/2 1/2	c FRUIT serv G/B	- Students (K-6) - Students (7-12)	485				
Milk, Variety	8 fl	oz Milk	- Students (K-3 opt.) _ - Adults/A la carte	15				
Food Items Served Purchase	Jnits Used Serv	ing Sizes	ow Many Servings? Leftovers/					

	Amount Prepared	oci ving olzes	Grades	Adult/A la Carte	Substitutions
Meat/Meat Alternate: Salisbury Steak, D-23 Chicken Nuggets, Brand X	220 each 76-1/4 lb	K-6: each 5 nuggets	K-6: 195 305	Adult: 10 5	15 serv 2.5 lb
Vegetable/Fruit: Baked potato 5 oz, 1/25	300 each	K-6: each	K-6: 250	Adult: 10	40 each
Vegetable/Fruit: Carrot Sticks Broccoli Flowers Cherry Tomatoes	12.5 lb 13 lb 11 lb	K-6: 1/8 c 1/8 c 1/8 c	K-6: 235	Adult: 5	1/2 lb 1/2 lb 1 lb
Vegetable/Fruit: Cherry Cobbler, C-6	500 each, 20 pans (25 serv/pan)	K-6: l square	K-6: 485	Adult: 15	
Grains/Breads: Whole-Wheat Roll	12 lb 6 oz	K-6: l each	K-6: 195	Adult: 10	15 each
Grains/Breads:					
Condiments/Dressing: Low-fat Ranch Dressing BBQ Sauce	350 305	K-6: each portion pack	K-6: 300 290	Adult: 10 5	10
Milk: 2%	10	K-6 1/2 pint	K-6: 5	Adult: —	5 (1/2 pts)
1%	90		85	_	
Fat-free	200		195	5	5 (1/2 pts)
Chocolate 1/2%	200		200	_	

• •	• • •	• •	•	• • •	•	<u> </u>		1																																					
•					•	If Sub o Leftover	>																																						
•					•	Leftover																																							
•					•	Adult ervings	gs																																						
•					•	A la carte Servings S	# of Serving																																						
Menu					•	Student Servings	Actual																																						
• • •					• • •	Amount of Food Used**	(lb. or qty.)																																						
•					•	Total	rvings																																						
•	• •	• •	•	• • •	•	Adult A la Carte	cted # of ser																																						
	ord			for age. recipe		Student	Proje																																						
	ction Rec		— Meal Date — Lunch	e if adjusted	usned. Use separate line if adjusted USDA Food Buying Guide or USDA eals:Actual number lls:Actual number	e if adjusted ide or USDA I l number	al number I number	Portion Size*	(#/wt./qty.)																																				
		ate		⊧parate lin∉ uying Gui∈		Actua Actua	eals:Actua Ils:Actual	eals:Actua Ils:Actua	eals:Actua Ils:Actua	eals:Actua Is:Actua	eals:Actua Is:Actua	eals:Actua IIs:Actua	eals:Actua ils:Actua	eals:Actuc ils:Actua	eals:Actua Ils:Actua	Actua	Actua Actual	Actual Actual	Actual Actual	Actua Actual	Actua Actua	Actua Actua	Actuc	Actuc	Actuc	Actua	Actua	Actua Actual	Actua Actua	Actua	Actua Actua	Actua	Actua Actual	Actua Actual	Actua Actual	Actua Actual	Actua	Actual Actual	Age or Grade	Group					
	Produ	Meal D		_ Lunch _		anned. Use se USDA Food B eals:										Person	Vespolisible																												
at #3	ased			: Based on U	student m adult mea	Recipe or Product	(name or #)																																						
Sample Form	Nutrient-B	lte	reakfast	Portion size: Must be Amount of food used or CN Database item.	lanned number of anned number of	Menu Item Used	ana rorm																																						

If Sub or leftover • • > • • • Projected # Reimbursable Meals Served: • Amount leftover • • • • • • Total: • Total • Actual # of Servings • • Adult/A la Carte • • • • Menu Age/Grade Age/Grade Age/Grade Student • • • • Amount of Food Used** -(Ib. or qty.) • • • • Actual # Nonreimbursable • • • Total • Projected # of Servings • • • Adult/A la Carte Prog. Adults: • Total: • • • Adults: • Student • 1/2 pints * Portion size: Must be same as planned. Use separate line if adjusted for age.
** Amount of food used: Based on USDA Food Buying Guide or USDA recipe or CN Database item. **Nutrient-Based Production Record** Portion Size* (#/wt./qty.) Extra Items/Sales: # items and/or\$ Other items Age-Grade and/or \$ Meal Date Milk Food Used and/or Recipe # (Check if USDA) Lunch Projected # Reimbursable Meals Served: Sample Format #4 Total: Menu Item Other Item(s) Age/Grade Age/Grade Age/Grade **Breakfast** Entrée(s) Milk Site



or CN Database item.				-									
Menu Item Used	Recipe or Product	Person	Age or Grade	Portion Size*	Student	Adult A la Carte	Total	Amount of Food Used**	Student Servings	A la carte Servings	Adult Servings	Leftovers	lf Sub or Leftover
and Form	(name or #)	Kesponsible	Group	(#/wt./qty.)	Projecte	ed # of servi	ngs	(lb. or qty.)		Actual			>
Salisbury Steak	D-33	Sue	K-6	l each	200	20	220	220 serv	195		10	15 serv	
Chicken Nuggets	Brand X	Yolanda	K-6	5 ea/4 oz	300	വ	305	76-1/4 lb	290		വ	2.5 lb	
Baked Potato, 5 oz, 1/25		Akiko	K-6	l each	290	10	300	300 each	250		10	40 each	
Carrot Sticks		Akiko	K-6	1/8 c	245	വ	250	12.5 lb	235		വ	1/2 lb	
Broccoli Florets		Akiko	K-6	1/8 c	245	വ	250	13 lb	235		വ	1/2 lb	
Cherry Tomatoes		Akiko	K-6	1/8 c	245	വ	250	11 lb	235		ß	1 lb	
Cherry Cobbler	C-06	Yolanda	К-6	25 serv/pan square	475	8 5	500	20 pans	485		15	I	
Whole-Wheat Roll	Brand Y	Yolanda	K-6	l each	200	20	220	12 lb 6 oz	195		10	15 each	
BBQ Sauce	Brand Z	Akiko	K-6	2 Tosp.	300	വ	305	305 each	290		ß	10 each	
Low-fat Ranch Dressing	Brand Q	Akiko	K-6	2 Tbsp.	340	10	350	350 each	300		10	40 each	
Milk, Variety	Recipe based on actual use	Sue	K-6	1/2 pint	490	10	500	500 (1/2 pints)	485		ទ	10 (1/2 pts)	

Menu Planning Records

Format #4	d Production Record Salisbury Steak w/ Whole-Wheat Roll -or- Chicken Nuggets w/ BBQ Sauce	<u>ary</u> Meal Date <u>May 14, 2008</u> Baked Potato	-or- Fresh Veggies Low-fat Ranch Dressing planned. Use separate line if adjusted for age. Cherry Cobbler on USDA Food Buying Guide or USDA recipe Milk	ood Used Portion Student A la Carte Total Amount of Student A la Carte Total Food Used** Student A la Carte Total Amount Lettover	eck if USDA) Grade (#/wt./qty.) Projected # of servings (Ib. or qty.) Actual # of servings Lettover	-35 rand X K-6 1 portion 200 20 20 220 220 220 220 220 220 220	oz, 1/25 K-6 1 portion 290 10 500 500 250 10 250 40 each /8 cup total 1/8 c each veg 245 5 250 12.5 lb car 235 5 240 1/2 lb /8 currots, broccoli, foar of 13.1 b 235 5 240 1/2 lb /8 currots of 13.1 b 235 5 240 1/2 lb /8 currots of 13.1 b 235 5 240 1/2 lb	Observed I notified Addition Addition Addition -06 1 portion 475 25 500 20 pans 485 15 500 -	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	K-6 1/2 pint 490 10 500 500 (1/2 pis) 485 5 490 10	ierved: Extra Items/Sales: Actual # Nonreimbursable Actual # Reimbursable Meals Served:	300 Milk 0 1/2 pints 1, 1 _R Age/Grade K-6 : 485	and/or \$ Adults: Age/Grade: Other items0 # items Adults: Age/Grade:	and Total: 15 Total: 15 Total: 485
ormat #4	Production	<u>y</u> Meal Date <u>Ma</u>	- anned. Use separate line i USDA Food Buying Guide	d Used Age-	k if USDA) Grade	K-6 1	v 1/25 K-6 1 cup total 1/ in, pre-cut (c		ld Y ll l	K-6	ved: Extr	Milk	and	

Chapter 7

Menu Planning Records

	Preparation Directions		(Meal Pattern Contribution)
			PROVIDES
	100 Servings	Weight Measure	NG SIZE:
	50 Servings	Weight Measure	SERVI
			VOLUME:
lame:	Ingredients		YIELD:
Recipe N			WEIGHT:

MANUFACTURERS' DATA SUBMISSION FORM

For directions on how to fill out this form, see reverse side.

1. Product Identification

PRODUCT NAME:	
Brand	
Product code	
List CN Label number if appropriate	
Is this product in the Child Nutrition (CN) Database?	
CN DATABASE = Yes No	

2. Package Size and Servings Per Package

Package Size = _	grams	lbs	fl. oz.	
Standard Serving	Size =			
Number of Servir	ngs Per Packa	age =		
	0	0 =		

3. Basis for Nutrient Data

Nutrient data is being given: (Check one) _____As Served ____As Purchased Analysis is based on: (Check one)

Per Serving ____ 100 grams

Weight per serving = _____ grams

4. Individual Values of Nutrients and Dietary Components

If you *do not* have information on a nutrient, write "M" or "missing." If this product *does not contain* a particular nutrient, write "0."

Calories	_ kcal	Protein	grams
Total fat	_ grams	Saturated fat	grams
Carbohydrates	_ grams	Sodium	milligrams
Total dietary fiber	grams	Cholesterol	milligrams
Calcium	_ milligrams - <i>or</i> - _ milligrams - <i>or</i> -	 % DV (Daily Value) % DV 	
Vitamin C	_ milligrams - <i>or</i> -	% DV	
Vitamin A	_ IU <i>-or-</i> RE -	<i>-or%</i> of DV	
IU = Inter	national Units, I	RE = Retinol Equivalents	

5. Fat and Moisture Gain/Loss

When this product is prepared, there is a: Fat change (+/-) ___% Moisture change (+/-) ___%

6. Special Instructions for Preparation (if appropriate)

To prepare this product, the manufacturer recommends:

HOW TO FILL OUT THIS FORM:

USDA has developed this standardized form to help schools obtain information on foods they will be serving to children. They will use this information to develop recipes, analyze menus for nutritional value, and prepare products for lunch or breakfast.

1. Product Identification: List name of product (and brand, if appropriate). Also list product code if possible. If you know the product has a CN Label number, list that as well. Check yes or no for CN Database.

2. Package Size and Servings Per Package: Write in package size as appropriate in grams, pounds, or fluid ounces. Indicate standard serving size and number of servings per package.

3. Basis for Nutrient Data: Indicate with a check mark whether you are submitting nutrient data for this product on an "As Served" or "As Purchased" basis. Use the **"As Served"** basis for any food that *does not have*: (1) any ingredients added in preparation or (2) any fat absorbed during preparation.

Use the **"As Purchased"** basis for any food that: (1) has ingredients added in preparation (such as milk, eggs, and oil added to baked product mixes); (2) is prepared by frying; (3) can be prepared in varying ways (for example, a food that can be baked *or* fried); or (4) gains or loses moisture/fat during preparation.

In addition, indicate whether nutrient analysis is based on 100 grams or per serving. Also indicate weight per serving.

4. Individual Values of Nutrients and Dietary Components: Please fill out completely, leaving no lines blank. (1) If you have information on a nutrient, write the specific value in the unit of measurement indicated. (2) If you do *not* have information on a nutrient, write "M" or "missing." (3) If this product *does not contain* a particular nutrient, write "0."

5. Fat and Moisture Gain/Loss: If you checked "As Purchased" above, also fill in this section if there is a fat or moisture change during preparation.

(Fat may be gained or lost in cooking some foods, thereby changing the foods' nutrient value. Methods of preparation such as breading, frying, or baking affect this fat gain or loss. For example, chicken baked in the oven will lose fat during cooking, while batter-coated or breaded chicken that is deep fried will gain fat. If fat is absorbed or gained, fat grams and calories from fat will be increased. If fat is lost, fat grams and calories from fat will be decreased.)

6. Instructions for Preparation: If appropriate, indicate instructions such as: ingredients to be added, cooking methods, cooking time, and cooking temperature.







LOWFAT

Marketing Your Product

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CHAPTER 8



Marketing Your Product

ou've worked hard to plan quality meals and YOU know they are the best in town — for nutritional value as well as taste. How can you be sure your customers get that message? Bottom line: You need to *market* your product.

In this chapter, we'll focus on building an effective marketing plan. We'll explore ways to use promotions and merchandising to get students' attention. We'll also look at ways to reach out to teachers, parents, school administrators, and the community. It's important to get everyone involved — starting with your staff!

Your marketing plan is an investment in the future success of your food service operation. Even more important, it's an investment in children's health. By increasing customer participation and sales, you're increasing the number of times a student eats a nourishing meal.

You face stiff competition, especially from fast-food franchises who are masters at attracting customers. But you *can* influence whether a student eats in your cafeteria or somewhere else. Start with quality meals and quality service, combine these with good marketing and effective promotions, and you've got a recipe for success!



QUALITY PLUS MERCHANDISING = SUCCESS

Merchandising is the way you encourage students to buy the healthy meals you offer for breakfast and lunch. How you present food and menus is extremely important so is how your employees present themselves and treat customers.

Having a clean, well-lighted serving line and staff in attractive uniforms signals to customers that yours is a *quality* program. Have you ever seen a fast-food franchise with poor lighting?

You must constantly deliver a message to everyone that your meals look good, taste good, and are the best bargain in town.



Building An Effective Marketing Strategy

How can you build an effective marketing strategy? Several steps are listed below. All are important, but you don't necessarily have to carry them out in the order given. In fact, many you will do simultaneously! This is just an overview — read on for more details and suggestions.

Commit to having a marketing plan.

Then look for ways to get your staff involved. Your employees' interest and enthusiasm is crucial.

Empower staff to achieve quality service.

How your staff prepares, showcases, and serves foods to customers is critical to the success of your marketing efforts. Encourage employees to consider how food looks as well as tastes.

Be customer-oriented.

Be sure employees greet customers with a smile. Learn students' names. Wear name tags so that students can greet your staff by their names, too.

Target your customers.

Make an effort to better understand your customers. Find out what students like and dislike, and what gets their attention. As you know, your competition makes great efforts to do this! For starters, you might set up a student advisory group.

Spread the word that school meals are a SMART choice.

Help students *understand* that what they eat affects their health in important ways. Market school meals as the healthy choice, and seek opportunities to get this message across in every way you can.

Make the most of your menus.

They are a direct line of communication with parents as well as students. Cultivate the natural link between the classroom and lunchroom through activities such as nutrition quizzes and games on the back of menus.

Use promotions creatively.

Promotions are an important part of an effective marketing strategy. They can be single events or a series of events, and they can accomplish a variety of goals.

For example, you might plan a promotion to: generate excitement about your program or a particular menu; increase parents' awareness of the nutritional value of school meals; and encourage students to choose a variety of foods.

Get the whole school involved.

Offering healthy school meals is a valuable service to your community. Give everyone the chance to become involved. Seek ideas from students, parents, teachers, and school administrators. Generate excitement by inviting parents and members of the community to attend special meals and other activities.



Getting Started

You've decided to pay more attention to marketing. Start by looking around and asking yourself questions like these:

Can we brighten up the cafeteria and make it more fun?

- How can we decorate? Will students, teachers, or parents be willing to help?
- What are the school colors? Can they be used in the cafeteria?
- What is the school mascot? Can the mascot's name be part of the cafeteria's name?

Are we doing a good job displaying food?

- What is the first thing a student sees in the serving area?
- How does the food look from the customer's point of view?
- How about garnishes? Do they complement the flavor, color, and texture of the foods?

Are we doing a good job serving food?

- Does the staff serving the food know how to place it on the plate or tray so it will look attractive?
- Are employees using the correct serving size and proper serving utensil for each food item?
- Are pre-portioned food items being served in appropriate quantities for the grade groups being served?

Making the Most of Your Menus

Menus are important. Your customers read these every day. In fact, students often decide to purchase lunch based solely on the day's menu or the promotions announced with it.

Menus also communicate information about the program to parents, teachers, and school administrators. Because menus list selling prices of lunches and á la carte items, this is your best opportunity to show that the complete lunch is the best buy. Here are some tips:

- Jazz up your menu writing. For example, use lively language to describe menu items. For "hamburger" say: "Build Your Own Superburger." List "Chicken Chow Mein" or "Beef Stir-Fry" but don't stop there — call the day's lunch a "Far East Feast."
- Send menus home with students. Include your phone number and let parents know they can approach you.
- Put activities on the back of menus. And reward teachers and students for completing the activities.
- Tell why school meals are a healthy choice. Use menus to tell students and parents about the nutritional value of the meals you're offering.

GO AHEAD — BRAG!

Including nutrition facts on menus is a good way to let parents and students know about the nutrition goals you're working to meet. For example, tell them you're following the advice outlined in the *Dietary Guidelines for Americans*. You may find that many parents are already familiar with and interested in these Guidelines. They'll be pleased you are, too.

For a special promotion, print a menu that gives more detailed information about a particular nutrient or nutrients. You will find some interesting facts on key nutrients, such as food sources and contribution to good health, in Chapter 4 and Appendix 9.

Planning Successful Promotions

A promotion is an event or a series of events designed to accomplish a specific goal or goals. Promotions can be big or small, short or long, and can reach many different audiences. It's best to begin by identifying *what you want to achieve* and *who you want to reach* with this particular promotion.

For parents, for example, you might plan a short promotion for Back-to-School Night — perhaps an attractive display with a brochure on why school meals are a smart choice. To interest students, you might plan a series of festive meals, complete with costumes for your staff or classroom tasting parties.

A promotion provides an excellent opportunity to introduce new menu items. But don't overdo it — show only one new food item at a time. A total of two or three in a month is plenty! To make sure students notice:

- Make the new food item sound appealing on the printed menu.
- Offer an incentive a reward for choosing the new food.
- Display a poster that lists the food's nutritive value.
- Introduce new foods in the classroom or plan small portions when first offering a new food.

Your efforts to get students' attention need to be ongoing. Don't skip a month because there is a lot going on. Your customers will come to expect the promotions and be disappointed if there are none.



Planning a Promotion? THINK ABOUT THE "BIG" PICTURE!

There are lots of ways you can plan successful promotions. Use your imagination and the worksheet on page 216 to get started. Remember to think about the "big" picture – what students are interested in and what else is happening at school.

- Select an objective and target group. Decide what you want your marketing campaign to accomplish and who you want to reach.
- Determine a timeframe. Will you do a promotion for a day, a week, or an entire month?
- Check the school's calendar. You might want to plan promotions to coincide with or support other campus events, such as sports activities, dances, or plays. Or perhaps you want your promotion to be the week's big splash. Seasonal changes and holidays can offer opportunities for fun themes.
- Select a title. The title needs to get your customers' attention! "Jump on the Whole-Grain Train," "MyPyramid Power," and "A World of New Tastes" are a few examples.
- Plan for publicity. You need to plan in advance how you are going to get the word out. Publicity is critical to a successful promotion. But you don't need to do all the work. Local publicity resources can help, if you initiate the contact and develop working relationships.
- Work with student and parent advisory groups. You may already be working with an advisory group, but if not, consider setting one up for your special promotion and other activities, too.
- Have displays at special events and meetings. Announce your promotion by having a display table and brochures available during activities such as health fairs, Back-to-School Night, kindergarten orientation, and parent-teacher association meetings.

A PROMOTION PLANNING WORKSHEET

1.	Objective:				
	Activity:				
	Food Items:				
2.	Target Group: (Circle one or mo	ore)			
	Students Parents Teach	ers Ac	dministrators		
3.	Date(s):				
	Coincides with campus events?	Holidays?			
4.	Theme and Title:				
5.	Publicity:				
	(a) Print:				
	(b) Media: (c) Other:				
5.	Dress/Decorations/Merchandising	Tools:			
7.	Incentives/Prizes:				
8.	Who Is Responsible?				
9.	Costs/Expenses:				
10.	Evaluation:				
	Complete after your promotion by a	ircling the a	ppropriate num	nbers bel	ow.
		Poor	Satisfactory	Good	Excellent
Hov	v well did this promotion omplish our objective(s)?	1	2	3	4
fa	new food item was introduced,	1	2	2	A
- / / TC		I	Z	5	4
Hov	v did students respond?	1	2	3	Λ

Want to Get Students' Attention? TRY THESE MERCHANDISING TOOLS

There are lots of merchandising tools you might use to get students' attention. Use them in combination for best results!

Displays

A variety of display equipment can work well in a school setting. Kiosks, photo boxes, and free-standing posterboards or easels are just a few. Use them to promote new menu items, advertise theme days, and spread the word that it's fun to eat at school.

Bulletin boards

Do your students have time to read when they are waiting in the serving line? Bulletin boards — especially if they're fun to look at — can spark students' interest and extend an exciting invitation to learn. Designate one bulletin board for monthly promotions and one for general nutrition. You might be surprised at how interested students are!

Costumes or special accessories

When you're doing a promotion, have your staff dress for success! Make an event fashionable and fun with employees wearing buttons, aprons, hats, T-shirts, or costumes. You can make your own costumes or borrow or rent them.

Posters and banners

Perfect for a wall or even the wide side of a salad bar, banners can help add color and excitement to your cafeteria setting. Plus, they are inexpensive to do!

Signs

When trying to expand your customer base, place signs outside the cafeteria and in other areas around the school campus.

Static-cling decorations

Use them to decorate your cafeteria, to add color, or to create a mood for a special theme day. Static-decorations are easy to do and you can save and reuse them.

Music and props

Music can help set the stage for theme days, but it's great for regular days, too. Play music in the cafeteria while students are eating. Use music on the intercom system to get students' attention during morning announcements. Bring music from home, get it from your local library, or check the school library for possibilities.



Want to Get Students' Attention? USE PRIZES AND SURPRISES

Students love prizes and surprises! Use them to increase participation, reward young children for selecting new food items, and in general to make eating at school fun. Here are some ideas:

"Reach Into the Surprise Can"

Make school lunch a special occasion with a "Surprise Can." Each student who buys a complete school lunch (instead of á la carte items) gets to reach in and take a card. The lucky winner's card would announce a small prize.

Water Bottles, Fanny Packs, Frisbees, T-Shirts

Promote healthy exercise and eating habits by giving larger prizes. Look for sources of promotional materials, such as local sports stores and athletic associations.

Frequent Customer Card

Plan a frequent customer card program. When a student's card is stamped completely, he or she receives a prize.

Lucky Sticker Day

Young children love stickers. When they try new foods, reward them with a sticker. Use stickers to add excitement to the lunchline – put stickers on some of the trays and give small prizes to the lucky students who get them.

Pencils for Learning

Plan a word game that features foods for a healthy diet and give out pencils to students who play.

Poster Contest

Challenge elementary students to have a poster contest. The winning class gets a private party in the cafeteria with tablecloths and decorations.

"Wake Up to Nutrition"

Add excitement by telling students an alarm clock or timer will go off sometime during the meal service. Whoever is at the cash register when the buzzer sounds will get a prize or free food item.

Magnets to Take Home

At the beginning of the school year, give refrigerator magnets to students for posting school menus at home. Magnets featuring your logo help students and parents remember your program throughout the school year. And, if you don't have a logo, consider developing one!

Special Visitor

Invite a celebrity, such as a professional athlete, to dine with your students or have a costumed mascot visit the cafeteria. A staff member or parent volunteer can wear the costume and give a pep talk to get students involved in and excited about what's happening in their meal programs.

"Take a Taste"

Invite students to take a taste. For example, give out food samples at the entrance to the cafeteria or at the beginning of the serving line. (For added fun, have a costumed mascot offer samples to students waiting in line.) Have classroom or lunchroom tasting parties and let the students sample new items in advance. And use that feedback!



Generating Interest

School meals ARE the best choice for taste and good health. That's the message you want to get out in every way — and as often — as you can. Here are some tips for generating interest in your program. Use them to reach students, parents, teachers, and the larger community, too. These tips may also give you ideas for publicizing a particular promotion or enticing students to learn more about eating for good health.

Place information in mailings or handouts to parents.

See if you can include information in the principal's letter or perhaps in mail-outs by the parent-teacher association.

Reach out to student and local newspapers.

Offer a story idea — or an actual feature — to a local newspaper or campus newsletter. High school journalism students might enjoy helping you write the article. For a byline, they might even volunteer to write it themselves.

Contact local newsletter editors or writers. Tell them you can provide information in whatever form they prefer — short items for a regular "nutrition news" column or longer pieces that can be reproduced in their entirety. A note of caution: If you're not preparing the materials yourself, be sure to check that there are no copyright restrictions on what you're offering.

Many of your promotions will create great photo opportunities. Make sure student reporters and local newspaper staff know about them. Also have a camera on hand so you can take photos, too.

Take advantage of word-of-mouth publicity.

Look for opportunities to spread the word informally. For example, talk with students and teachers as they go through the line; visit the school nurse and health educators; talk with coaches.

Use flyers, invitations, and brochures.

Place a brochure describing your program, hours of operation, and meal prices in a clear acrylic stand in all the school's main offices. Give brochures to school district business managers, principals, superintendents, and presidents of parent groups. Set up display tables during special events.

Publicize activities with signs and the school's intercom system.

To publicize special promotions, put up signs several days in advance in places where students will be sure to see them. Follow up with announcements on the intercom several times for emphasis.



Form a student nutrition advisory committee.

A student advisory committee can help you in a variety of ways, including with menu changes. Include parents, teachers, administrators, and child nutrition staff as well. Making a committee successful can be time-consuming, but positive results will make the effort worthwhile.

Be sure to use or respond to the group's major suggestions. Also, when appropriate, be sure to involve administrators in any changes affecting serving times or procedures.

Sponsor school-wide nutrition games.

Place quiz questions in a variety of places where students and teachers might see them — for example, in teachers' mailboxes, resource and lunch rooms, and the school's main office. Give a master list of questions and answers to teachers or student leaders, who can announce the "nutrition question of the day" as an educational game.

Foster classroom-lunchroom links.

School food service professionals and teachers, especially health educators, are natural partners. Healthy meals can help students have the energy and nourishment they need to succeed in the classroom. And classroom activities can encourage children to choose foods for a healthy diet.

REACH OUT TO TEACHERS

Teachers are an important <u>audience</u> for your marketing plan. Ask them to help you get across the message that healthy school meals are a smart choice — for health <u>and</u> educational success. Give teachers information and activities they can use with their students. And be alert for opportunities to foster a classroom-lunchroom link, especially with health educators.

One activity you can easily pursue is printing nutrition activities on the back side of menus. Suggest teachers: (1) encourage students to complete the activities; (2) review the answers in class; and (3) incorporate nutrition mini-lessons. Teachers can also visit *teamnutrition.usda.gov* to order or download free classroom materials.

Help teachers plan activities that are lively and fun. Encourage students to: choose foods from every food group; eat more whole grains, vegetables, fruits, low-fat or fat-free milk and milk products; and select foods that are limited in total fat, saturated and *trans* fat, cholesterol, sodium, and added sugars.





Look for resources — near and far.

You might be surprised to learn how many people in your community are willing to help you market healthy food choices. The produce manager of your local supermarket, for example, might help you host a classroom tasting party.

A representative from organizations like the American Heart Association, the American Cancer Society, or the American Dietetic Association might accept an invitation to speak to teachers, students, or parents. These organizations can often provide valuable nutrition information materials as well.

Other sources are the National Food Service Management Institute (NFSMI), USDA's Food and Nutrition Information Center (FNIC), and the School Nutrition Association (SNA).

Build on success.

Use your imagination and ideas from your staff or the teachers at your school to make your cafeteria the "in" place to be. Form partnerships so that several people are involved and responsible for the outcome of your marketing efforts.

Put aside a set amount of your budget for marketing expenses each year. Start small and build according to your successes. Invest in marketing — the rewards to your program will be great!




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APPENDIXES



Appendixes

<u>APPENDIX 1</u>: Major Features of Food-Based Menu Planning: Comparing Traditional and Enhanced

TRADITIONAL

1. Nutrition Goals

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

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.

ENHANCED

Same as Traditional

• 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. 225

THE REAL AND THE REAL

TRADITIONAL

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.

4. Meal Structure for Lunch

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.

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

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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

• 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

• Milk:

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

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

• Milk:

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.

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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 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 schools.

Optional for lower grades.

Students may decline one food item from any food component.

Same as Traditional

Same as Traditional

ice/Fruit/Ve

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8. Standardized Recipes

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

9. Processed Foods

A record of products used 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 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. Same as Traditional

Same as Traditional

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Same as Traditional

Same as Traditional

229

or other



Appendix 1

<u>APPENDIX 2</u>: 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 <u>serve</u> CN-labeled products in meals planned with NSMP or Assisted NSMP.



<u>APPENDIX 3</u>: 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 3101 Park Center Drive, Room 632 Alexandria, VA 22302 Phone: (703) 305-1624 Fax: (703) 305-2549 Web site: teamnutrition.usda.gov 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 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" x 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 25-½" x 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 700 South Washington Street, Suite 300 Alexandria, VA 22314-3436 (703) 739-3900 and 1-800-728-0728 (SNA's Emporium) Fax: (703) 739-3915 Web site: www.schoolnutrition.org E-mail: servicecenter@schoolnutrition.org

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 6 Jeanette Phillips Drive, PO Drawer 188 University, MS 38677-0188 Phone: (662) 915-7658 or (800) 321-3054 Fax: (662) 915-5615 or (800) 321-3061 Web site: **www.nfsmi.org** 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® 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.

www.nfsmi.org/Information/fbgindex.htm.

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 8 ½" 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

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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.

5. Healthy Meals Resource System

Healthy Meals Resource System

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: **healthymeals.nal.usda.gov** 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.

<u>APPENDIX 4</u>: 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 PROGRAMS¹

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

GROUP C	MINIMUM SERVING SIZE FOR GROUP C
 Cookies² (plain) Cornbread Corn muffins Croissants Pancakes Pie crust (dessert pies², fruit turnovers³, and meat/meat alternate pies) Waffles 	1 serving = 31 gm or 1.1 oz 3/4 serving = 23 gm or 0.8 oz 1/2 serving = 16 gm or 0.6 oz 1/4 serving = 8 gm or 0.3 oz
GROUP D	MINIMUM SERVING SIZE FOR GROUP D
 Doughnuts³ (cake and yeast raised, unfrosted) Granola bars³ (plain) Muffins (all, except corn) Sweet roll³ (unfrosted) Toaster pastry³ (unfrosted) 	1 serving = 50 gm or 1.8 oz 3/4 serving = 38 gm or 1.3 oz 1/2 serving = 25 gm or 0.9 oz 1/4 serving = 13 gm or 0.5 oz
GROUP E	MINIMUM SERVING SIZE FOR GROUP E
 Cookies² (with nuts, raisins, chocolate pieces and or/fruit purees) Doughnuts³ (cake and yeast raised, frosted or glazed) French toast Grain fruit bars³ Granola bars³ (with nuts, raisins, chocolate pieces and or/fruit) Sweet rolls³ (frosted) Toaster pastry³ (frosted) 	1 serving = 63 gm or 2.2 oz 3/4 serving = 47 gm or 1.7 oz 1/2 serving = 31 gm or 1.1 oz 1/4 serving = 16 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
 Cake² (plain, unfrosted) Coffee cake³ 	1 serving = 75 gm or 2.7 oz 3/4 serving = 56 gm or 2 oz 1/2 serving = 38 gm or 1.3 oz 1/4 serving = 19 gm or 0.7 oz
GROUP G	MINIMUM SERVING SIZE FOR GROUP G
 Brownies² (plain) Cake² (all varieties, frosted) 	1 serving = 115 gm or 4 oz 3/4 serving = 86 gm or 3 oz 1/2 serving = 58 gm or 2 oz 1/4 serving = 29 gm or 1 oz
GROUP H	MINIMUM SERVING SIZE FOR GROUP H
 Barley Breakfast cereals (cooked)⁴ Bulgur or cracked wheat Macaroni (all shapes) Noodles (all varieties) Pasta (all shapes) Ravioli (noodle only) Rice (enriched white or brown) 	1 serving = 1/2 cup cooked (or 25 gm dry)
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.

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(l)(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? □ Yes □ No

LUNCH B:

The school offers: Pizza Fresh Peach Milk *The student chooses:* Fresh Peach Milk

Reimbursable under OVS? □ Yes □ No

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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? \Box Yes \Box No

LUNCH D:

The school offers: Chicken Nuggets Tossed Salad Dinner Roll Milk *The student chooses:* Dinner Roll Tossed Salad

Reimbursable under OVS? \Box Yes \Box No

LUNCH E:

The school offers: Chicken Enchilada Low-fat Refried Beans Milk *The student chooses:* Chicken Enchilada Low-fat Refried Beans

Reimbursable under OVS? □ Yes □ 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:

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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.**

<u>APPENDIX 6</u>: 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

—	CN	
	000	000*
CN	Each 5.00 oz Pizza with Ground Beef and Vegetable Protein Product provides 2.00 oz equivalent meat/meat alternate, 1/2 cup serving of vegetable, and 1 1/2 servings of bread alternate for the Child Nutrition Meal Pattern Requirements. (Use of this logo and statement Authorized by the Food and Nutrition Service, USDA, 00/00**).	CN
	CN	

* 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

<u>APPENDIX 7</u>: 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)

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- (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.

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- (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 sec. 210.11(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.



<u>APPENDIX 8</u>: 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 <u>must</u> offer fluid milk in a variety of fat contents and <u>may</u> 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

<u>APPENDIX 9</u>: 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:

- 1. Carbohydrates
- 2. Proteins
- 3. Fats
- 4. Vitamins
- 5. Macrominerals
- 6. Microminerals
- 7. Water

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.

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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 (Bl2)

- 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 275

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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

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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

<u>APPENDIX 10:</u> 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° 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.



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