

PLANNING, SELECTING, STORING, PREPARING & SERVING FOOD TO MEET NUTRITIONAL NEEDS

Planning Food to Meet Nutritional Needs

Grade Levels: 7-12

Concept: Meal Planning/Management

Comprehensive Standard: 6.3 Demonstrate planning, selecting, storing, preparing and serving of foods to meet nutritional needs of individuals and families across the life span

Technical Standard(s): 6.3.2 Select, store, prepare and serve nutritious and aesthetically pleasing foods that meet the health and wellness needs of family members based on available resources

LESSON COMPETENCIES

- Plan meals following *MyPyramid* (www.mypyramid.gov/) and the *Dietary Guidelines for Americans* (www.health.gov/dietaryguidelines/)
- Plan meals that are nutritious and appealing
- Identify other factors that individuals and families must consider when making meal plans.

Anticipated Behavioral Outcomes

- Students plan nutritious and appealing meals when eating at home or selecting foods away from home.

Resources Needed:

- Access to *MyPyramid* (www.mypyramid.gov) website, brochures or printed reference
- Copies of handouts for all students

References for teachers and students:

Byrd-Bredbenner, C. (2007). *Adventures in Food and Nutrition*. Goodheart-Willcox Publishing, Tinley Park, IL www.g-w.com Chapter 11, What's on the Menu?

NEW The *New York Times* has an archive of lesson plans with related news articles. Check out these lesson plans for use in this area:

Mmmm, Mmmm ...and Good

www.nytimes.com/learning/teachers/lessons/20041124wednesday.html

Creating a Supermarket Proposal Based on Healthy Food Options

In this lesson, students will consider their own diets and examine an op-ed article about organically produced foods. They then research alternatives to various foods for the creation of a supermarket and reflect on their own diets after keeping a food journal. (November 24, 2004)

Background Information:

- The new *MyPyramid* (www.mypyramid.gov/) and the *Dietary Guidelines for Americans* (www.health.gov/dietaryguidelines/) are important tools to assist us when planning meals. However, there are many other factors that need to be considered to plan meals appropriate and appealing for everyone who will be eating.

When planning meals, you need to consider the following:

- Who will be eating? (ages, special diets, food allergies, etc.)
- When will you be eating?
- Where will you be eating? (family kitchen, picnic in park, camper, etc.)
- What foods do you have available or could have available? (seasonal foods, what foods you have on hand, etc.)
- Why are you eating? (to celebrate a birthday? A family supper?)

Meals should also be planned considering:

1. Variety of
 - colors
 - shapes and sizes
 - temperatures
 - flavors
 - textures
 - preparation methods
2. Equipment and facilities available
3. Skills of individual preparing the food
4. Time available
5. Nutrition (using *MyPyramid* (www.mypyramid.gov/) and the *Dietary Guidelines for Americans* (www.health.gov/dietaryguidelines/))
6. Budget
7. Family Values (economy, health, home-prepared food, etc.)

Learning Activities:

Middle School Level

- Using paper plates and the food models or laminated pictures of food, arrange the foods on a plate as they would be served together at a meal. Plan two meal plans which show a contrast in each of the following areas:
 - **color** (For example, Meal Plan 1 – Baked Halibut, Mashed Potatoes with Butter, Cauliflower, Pear Sauce, White Bread and Milk and Meal Plan 2 – Pork Chop, Baked Potato with Sour Cream & Chives, Green Beans, Sliced Strawberries, Whole Wheat Dinner Roll and Milk)
 - **texture**
 - **taste/flavors**
- Discuss the following with students:**
- Which of these 2 meals looks more appealing? Why?
 - How does the appearance of a meal impact your response to it?

- Do both meals have foods recommended in *MyPyramid* (www.mypyramid.gov/)? Name which food fits into each group.
- In addition to selecting foods using *MyPyramid* (www.mypyramid.gov/) what other factors should be considered when planning a meal? List responses on the board and discuss. Guide discussion to include factors discussed in the background information
- **NEW** Have students visit *MyPyramid* (www.mypyramid.gov/) to determine their individual plan referred to as “*MyPyramid Plan*” (www.mypyramid.gov/mypyramid/index.aspx) based on their individual characteristics.
- Have students become a “*Diet Designer*”. Develop a meal plan for the family described on this handout for one day and by considering all factors to consider in meal planning discussed in this lesson by completing the *Diet Designer* activity

NOTE TO TEACHER: Students need to complete the “*MyPyramid Plan*” (www.mypyramid.gov/mypyramid/index.aspx) activity before moving on to the *Diet Designer* activity.

High School Level

- Modify an existing menu to meet the special needs of individuals by completing a “Menu Makeover activity”. **NOTE TO TEACHER:** You will need to provide a menu/meal plan for each student AND a special need of a family member for them to consider as they complete the “makeover” of the menu/meal plan.
- Using an assigned budget for a family, plan 3 days of menus that fit within the assigned budget. Use a variety of income levels by referring to the information in Unit 1 on Food Security/Hunger.
- Students conduct an analysis of their food choices related to *MyPyramid* (www.mypyramid.gov/) by completing the *How Does Your Diet Rate?* activity.

Extended Learning Activities

***School Menu Plans** – Meet with the cooks in your school and interview them. Ask what factors they need to consider when making meal plans for a school week. Ask what government guidelines they are required to consider, etc. Ask if you could help plan the menus for one week by meeting with them.

Diet Designer

Name _____

Your Mom has asked you to assist her with the meal planning this week. She is going to be out of town on Thursday and she wants you to plan the meals for Thursday for you, your sister and your Dad that day. You will be responsible for preparing the meals including packing a sack lunch for each of you.

As you “design” this daily meal plan, consider MyPyramid, as well as the other considerations for meal planning discussed in class. Write out your meal plan in the table below and indicate the cups or ounces from MyPyramid that would be provided by your choices. Begin by inserting the recommendations from [MyPyramid Plan](#) for you in the spaces provided in row one.

Meal Plan	Grains _____	Vegetables _____	Fruits _____	Dairy _____	Meat _____	Extras Eat Sparingly
B R E A K F A S T						
L U N C H						
D I N N E R						
S N A C K						

How Does Your Diet Rate?

Name _____

Directions: Complete the steps below as directed to determine how your diet matches with the recommendations of your personalized version of *MyPyramid* (www.mypyramid.gov/).

Step 1. Food Log

List all of the foods that you had to eat yesterday (be sure to include snacks, condiments, glasses of water, etc.) and the approximate of each.

Foods I Ate Yesterday _____ *Amount Consumed*
Grams of Fat

- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *
- *

Step 2. Using references provided by your teacher, identify the number of grams of fat in each food. Add to the food log above.

Step 3. Answer these questions:

1. Did you have the amount recommended for you from the *MyPyramid* plan (www.mypyramid.gov/)? (refer to *My Pyramid* reference)

	State the Amount Recommended	Amount You Had
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For You _____

Grain Group	_____	_____
Vegetable Group	_____	_____
Fruit Group	_____	_____
Milk Group	_____	_____
Meat Group	_____	_____

2. a. Convert the grams of fat you consumed to teaspoons using the “Gram Conversion Calculator” found at http://www.gourmetsleuth.com/gram_calc.htm

I consumed _____ grams of fat beyond those allowed in my personal MyPyramid plan and that is equal to _____ teaspoons of fat.

- b. Complete the table below.

Teaspoons Recommended for You	Amount You Had
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Fat _____

- c. Calculate the number of calories from fat you consumed using this formula provided by USDA:

1 teaspoon of fat has 45 calories

Calories from fat that I consumed were _____ calories

3. Estimate the amount of added sugars you ate. (sugar, pop, desserts, ketchup, etc.)

Sugars _____ teaspoons of sugar

Calculate the number of calories of sugar you consumed using these formulas provided by USDA:

1.0 cup of sugar has 774 calories

1.0 tsp of sugar has 16 calories

Calories from sugar that I consumed are _____ calories.

4. Add the amount of calories of fat beyond those allowed in your personal MyPyramid plan and sugar that you consumed. How does this compare to the amount of discretionary calories recommended for you in MyPyramid?

Step 4. What changes could you make for a healthier diet? List 3 things you could do to improve. Start by making small changes, such as switching to low fat salad dressings or adding an extra serving of vegetables by having a small bag of carrots for a snack.