

# Lesson Plan D

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**Course:** Fruits and Vegetables Galore – Helping Kids Eat More

**Module II:** Tricks of the Trade – Preparing Fruits and Vegetables

**Lesson D:** Preparing Fruits and Vegetables for Quality

**Lesson Length:** 45 minutes

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## Lesson Equipment and Materials

### Equipment

Overhead projector or Power Point

### Supplies

One piece of fresh fruit per group  
One paring knife per group

### Visual Aids

V-D1 *How to Maintain Nutrients in Fruit*  
V-D2 *Do the Dip*  
V-D3 *How to Maintain Freshness*  
V-D4 *How to Prepare and Serve Fresh Fruits/Veg.*  
V-D5 *How to Maintain Nutrients When Cooking Vegetables*  
V-D6 *Nutrients vs. Quality*

### Participant Materials

H-D1 *Cooking Methods for Vegetables*  
H-D2 *Quality Score Card for Fresh Fruit*  
H-A6 *Increasing Fruits and Vegetables in Meals -- A Plan for Your School*

## Lesson Preparation

1. Read the entire Lesson Plan D.
2. Reproduce all Participant Materials for Lesson D.
3. Post performance standards for Lesson D. Use flip chart or blank transparency.
4. The term School Nutrition Program (SNP) will be used for school foodservice or Child Nutrition.

## Lesson Outcome

On completion of the lesson, the learner will become actively involved in ensuring that the SNP increases the variety and consumption of fruits and vegetables based on the following **performance standards**:

- Review proper techniques for maintaining nutrients in fruits and vegetables.
- Evaluate the quality of products for service.

## Lesson Instruction

### ◆ **Setting the Stage**

Focus learner's attention.

- ▷ **How do we define quality? What are some specific things we look at?** *Color, size and shape of pieces, flavor, texture, and temperature.*
- ▷ All of these components of quality are affected by the preparation techniques we use, the amount of time involved and the temperatures we expose the product to. Keep these things in mind as we work through this lesson.

### ◆ **Relate to Past Experience**

- ▷ **Do you always evaluate food before placing on the service line? What should you do when quality falls short?**
  1. Substitute with a similar food.
  2. Prior to reusing, verify that food was cooked and maintained at 140 degrees F.
  3. If the food can be saved, use it in another dish to avoid waste.
  4. Find out what went wrong and correct the mistake for the next preparation.

### ◆ **Today's Lesson...**

- ▷ Our goal when preparing and cooking fruits and vegetables is simply to maintain nutrients and quality.

### ◆ **You Will Be Able To...**

- ▷ Review proper techniques for maintaining nutrients in fruits and vegetables.
- ▷ Evaluate the quality of products for service.

### ◆ **Identify the Purpose**

- ▷ Healthy children.

### Performance Standard

The learner will:

- Review proper techniques for maintaining nutrients in fruits and vegetables.
- Evaluate the quality of products for service.

### ◆ Lesson Content

- ▷ **How to Maintain Nutrients in Fruit.** Show and discuss *V-DI How to Maintain Nutrients in Fruit*. Fruits contain the most amounts of nutrients when they are at their peak of ripeness so that's the best time to use them.
  1. Since water removes nutrients, you shouldn't wash fresh fruits until just before you prepare or serve them. **Cool, running water is the best way to clean them.** Scrub firm produce, such as apples and potatoes, with a brush. Do not wash with detergent or soap because these could produce residues a person could absorb when eating. **Do not soak fresh produce because important nutrient can be lost in the water.**
  2. Whenever possible, serve with the peel or skin. Edible skins and peels such as that found on apples, contain nutrients (especially fiber) that is good to eat. Inedible skins and peels such as those found on oranges, bananas, and kiwis, help to protect the fruit from air which destroys nutrients.
  3. Cutting in large pieces reduces the amount of surface area exposed to air. For salad ingredients prepared in small quantities, use a sharp knife and designated cutting board. For salad ingredients prepared in large quantities, use: vertical cutter mixer (VCM) or commercial food processor, cutter/slicer attachment of the mixer, or slicer.
  4. Crushing fruit exposes almost all of the fruit to air and should therefore be avoided.
  5. Always use a **standardized recipe**. Following the recipe is very important for consistency. If you modify the recipe in any way, you will change the nutrient content.
  6. Maintain the correct color and shape of the fruit pieces
  7. Prepare fruit dishes so they have the appropriate texture.
  8. Do not overpower main fruit flavor with other ingredients.
- ▷ Designate separate cutting boards and knives for produce. Wash your hands, equipment and utensils before they touch produce. Wear gloves for ready-to-eat foods.

- ▷ **How to Prevent Browning of Fresh Fruits** – One of the most common problems with preparing fresh fruit is the fact that cut parts will turn brown if prepared in advance. This is fairly easy to prevent. Show *V-D2 Do The Dip*. The best thing you can do is to serve the fruit (such as apples) with the skin or peel on. The peel protects the fruit from exposure to the air which prevents browning (Apples are coated with a thin layer of edible wax, wash apples in cold water to maintain the shiny attractive appearance. The peel provides important fiber and a touch of color). If you need or want to remove the skin or peel... *continue with information on V-C2*.
- ▷ **How to Maintain Freshness of Fresh, Frozen and Canned Fruit**. Use *V-D3 How to Maintain Freshness...* and discuss. **How do you chill your canned fruit for service? Do you pan it up and chill the pans or do you chill the sealed cans?** Chilling the cans, as long as you allow enough time to chill but not enough for the cans to rust, is better for three reasons. First, if you don't use it all, you can keep the unopened cans for a while longer. Second, the cans take up less shelf space than full pans. Third, the cans are easier to transport to other sites than pans of fruit.
- ▷ **How to Prepare and Serve Fresh Fruit**. You have a few options when it comes to preparing and serving fresh fruit. Choose techniques that are quick and easy for you but which result in a pleasant product for your customer. Show and discuss *V-D4 How to Prepare and Serve Fresh Fruits*. Notice that regardless of how you serve fresh fruit, you should wash it by rinsing with cool water.
- ▷ **Maintaining Nutrients in Cooked Vegetables**. Show *V-D5 How to Maintain Nutrients When Cooking Vegetables*.
  - Cook vegetables in the smallest amount of liquid possible. Cooking in a lot of liquid causes loss of water-soluble nutrients such as Vitamin C, the B vitamins and some minerals.
  - Cook vegetables in the shortest amount of time for the desired tenderness. Water and heat cause loss of nutrients.
  - Cook most vegetables with a lid. This will help them cook faster.
  - For vegetables that have a skin, scrub well and cook with the skin on whenever possible. If the vegetables must be peeled, peel as thinly as possible. This is especially good to do with root vegetables such as carrots, sweet potatoes and (regular) potatoes.
  - Never add baking soda to cooked vegetables. It destroys vitamins (such as thiamin).

--Cook vegetables just in time to serve on the line - batch or staggered cooking.

--Vent strong flavored vegetables

--Avoid excessive stirring.

--When vegetables are cut, use a sharp blade and cut in the largest pieces that are desirable for the recipe. Pieces should be uniform to allow for even cooking.

--Follow the recipe or directions for cooking a vegetable. Do not overcook. (Overcooked vegetables in the cabbage family i.e. broccoli, cabbage, and cauliflower, will develop a very strong sulfur-like flavor.)

- ▷ When cooked, all fruits and vegetables become potentially hazardous. **HACCP principles** – (1) Cook to temperatures above 140 degrees F. (2) The food is served or discarded within four hours from the point in time when the food is removed from temperature control. Discuss the following cooking principles that will maintain appearance, texture and flavor of cooked vegetables:
  1. **Green Vegetables** – The color is adversely affected by heat and acid. Cook only until tender-crisp; overcooking will produce a dull olive-green or yellow product. Never add an acid such as lemon juice, color will change. Never add baking soda to green vegetables. While it makes the color brighter, it destroys important nutrients and can make the vegetable slimy.
  2. **Orange and yellow vegetables** – The color is more stable than in green vegetables. Cook only to tender-crisp.
  3. **Red vegetables** – Add a small amount of acid (lemon juice or vinegar) to beets or red cabbage to enhance color and flavor.
  4. **White vegetables** – Cook in a liquid that is neutral or slightly acidic, covered, to retain the color.
  5. **All vegetables should be cooked and maintained at 140 degrees for safety.**
- ▷ Distribute and discuss *H-D1 Cooking Methods for Vegetables*.
- ▷ **Hold Safely** –Minimize holding time by cooking as closely as possible to serving time. Preparing several hours in advance increases the opportunity for contamination and destroys the quality.
- ▷ **HACCP principle** - Keep cold foods below 41 degrees F. and hot foods above 140 degrees F. Check and record temperatures every 30 minutes. Take corrective action if needed.
- ▷ **Serve Safely**- Although it is very tempting to add the last few portions of cooked vegetables and fruits to a new, full pan on the serving line, this too can spread contamination so it is best to avoid it.

Combining cold fruits and vegetables is safe as long as you are sure they have been handled safely up to that point. Remember to keep serving areas clean, maintain safe temperatures, and make sure that sneeze guards and utensils are used correctly.

- ▷ ***V-D6 Nutrients vs. Quality. If you have to choose between a cooking method that maximizes nutrients and one that maximizes quality, which one should you choose?*** Answer: The method that will result in a good quality product. Nutrient content is very important and you should do what you can to maximize the amount of nutrients but quality come first, especially when we're talking about cooked vegetables.
- ▷ Well, now you know how to prepare and cook safe, nutritious, quality fruits and vegetables but your job is not done. You have not been successful unless the products you have prepared are still safe, nutritious, delicious and attractive when they are served to the students. Evaluating the products at the time of service, not just when you eat them for lunch at 11 a.m. is crucial.
- ▷ ***Activity (5-10 minutes) – Quality Menu Items.*** Distribute ***H-D2 Quality Score Card for Fresh Fruits and Fresh Fruit Menu Items.*** Distribute one piece of fresh fruit and one paring knife to each group. Instruct each group to evaluate the piece of fruit using the handout. Discuss the importance of evaluating all menu items prior to service.
- ▷ **1. Look at the appearance.** Are the colors bright but natural? Are the shapes and sizes of the pieces appropriate and uniform?
- ▷ **2. Taste it.** Is the texture appropriate for the dish (either crisp-tender or soft and smooth) and consistent throughout the product?
- ▷ **3. Does it taste fresh, mild and natural?** If it should be sweet, is it? Do the seasonings compliment or overpower the natural taste of the fruit or vegetable?
- ▷ **4. What is the temperature?** Cold fruits and vegetables should be served cold. This includes canned fruits! Cooked items should be served hot. The exact temperature depends on your situation. Although this quality score card specifies 160-180 degrees F. for baked fruits and cooked vegetables, they only need to be 140 degrees F. to be safe. If you have to hold the product for more than 20 minutes, a temperature closer to 140 degrees F. than 160 degrees F. is better because the higher temperatures will hurt the quality. Younger students may find foods at 160 – 180 degrees F. too hot.
- ▷ For more information on food preparation attend the 12 hour Pathways course ***Quality Food Preparation and Service.***

◆ **Performance Check**

- ▷ *H-B6 Increasing Fruits and Vegetables in Meals—A Plan for Your School.* Refer to the 5P's -- Preparing.

◆ **Closure**

- ▷ Preparation and presentation are just as important for prepared vegetables and fruits as they are for fresh produce. Attracting students' attention to select and consume these items is your goal.