



## Fruits and Vegetables Introduction

### Getting Ready

1. Review lesson plan before each session.
2. Copy handouts:
  - a. *Food Sources of Vitamins*
  - b. *Getting the Most for Your Money*
  - c. *Eat Your Colors the Easy Way*
  - d. Recipe (1)
3. Gather supplies needed for lesson and activities.

### Supplies Needed

1. Handouts.
2. Food Guide Pyramid poster.
3. NOAH News headline.
4. Activity supplies:
  - a. Flip chart (some pages need to be prepared in advance), color markers (black, blue or purple, green, yellow-orange, red) and tape.
  - b. Pieces of color paper (~ 3 x 5; red, green, yellow, orange, blue, purple, and white) and a basket or box in which to put the paper.
  - c. Basket with variety of colorful seasonal produce (one of each of the colors as available; use raisins, green apples, bananas, carrots, and tomatoes when seasonal availability is limited).
  - d. Sample serving sizes of fruits and vegetables (actual or models).
5. Ingredients to prepare the recipe.
6. Supplies for tasting recipe, such as plates, forks or spoons, and napkins.

### Beginning the Lesson

1. Introduce yourself by name and the organization you represent.
2. Summarize the lesson by giving the objectives.
3. Let the group know the lesson will be informal and they can ask questions anytime.

### Objectives – The participants will:

1. Understand the benefits of eating a variety of colorful fruits and vegetables.
2. Learn the benefits of phytochemicals in fruits and vegetables.
3. Understand where fruits and vegetables fit in the Food Guide Pyramid, know how many servings are recommended and appropriate serving sizes.
4. Identify which fruits and vegetables are in season and why it is best to buy produce in season.



## Script

### Introduction

*(Display basket of colorful produce to refer to during lesson. Can use produce as prizes for participants who answer questions, etc.)*

We are going to put on our creative thinking hats today *(put on hat for emphasis)*. Imagine with me, if you will, that you woke up this morning and picked up your daily newspaper. You open it to a big headline. It reads: **Scientists discover the secret to staying healthy and fit as we age!** *(Hold up Noah News headline)* It goes on to say this discovery may help:

1. **Fight cancer.**
2. **Fight heart disease.**
3. **Fight the effects of aging** (on eyesight, memory, immune function and painful inflammation).

Would you be interested? What if it turns out this discovery is actually inexpensive and available to everyone? In fact, it has practically been under our noses for ages!

Are you ready to know this timeless formula for health? **It is simply this, eating 5 to 9 servings of colorful fruits and vegetables every day – 5 A Day the Color Way.** *(Pick up basket of colorful seasonal produce.)* If there is one thing certain about diet, it is that you may reduce your risk of cancer, heart disease and other conditions associated with aging if you eat at least 5 servings of colorful fruits and vegetables daily, as part of an overall diet low in saturated fat and cholesterol.

So, how are you going to help yourself fight cancer, heart disease and other diseases of aging? Say it with me - **5 A Day the Color Way, by eating 5 to 9 servings of colorful fruits and vegetables every day to stay healthy and fit!** *(Print phrase on flip chart if using)*

### Staying Healthy and Fit the Color Way - Activity

*Note to the speaker: Place the pieces of colored paper (red, green, yellow, orange, blue, purple and white) in the basket.*

What are the colors of health? It is more fun to think about a rainbow of colors when you choose your daily fruits and vegetables. Think **5 A Day the Color Way** to stay healthy and fit by choosing foods daily from these colors *(pick up pieces of colored paper, one at a time and call out the colors)*: **blue-purple, green, white, yellow-orange, and red.**

*Pass the basket around the group and let 5 volunteer participants select a color and name a fruit or vegetable in this color group, then let others in the group name additional fruit and vegetables in this color group. Write down the named fruits and vegetables on a blank flip chart page (can use separate pages for each color). You may also encourage each volunteer to tell*



*everyone the last time he or she ate this fruit or vegetable. You will name other fruits and vegetables in this color category and describe the benefits of this color category (see below) while writing the names on the flip chart pages.*

**Blue-purple:** blackberries, blueberries, dried plums (*or prunes*), purple/black grapes, muscadine grapes, plums, raisins, eggplant, peppers, and blue potatoes.

Your blues may help reduce your risk of some cancers, keep your urinary tract healthy, help with memory, and help with healthy aging.

**Green:** avocados, green-skin apples, green grapes, honeydew melon, kiwi, green-skin pears, limes, scuppernong grapes, artichokes, asparagus, broccoli, Brussels sprouts, cabbage, green beans, celery, cucumbers, leafy greens, Romaine lettuce, okra, peas, peppers, spinach, and zucchini.

Eat your greens to reduce your risk of cancer, to protect your eyes from cataracts and macular degeneration, and to help keep bones and teeth strong.

**White:** bananas, white nectarines or peaches, cauliflower, garlic, ginger, jicama, mushrooms, onions, potatoes, and turnips.

Even white has “phyte” and can help you have a healthy heart and reduce risk of some cancers.

**Yellow-orange:** Yellow-skin apples, apricots, cantaloupe, grapefruit, lemons, mangos, nectarines, oranges, papayas, peaches, yellow pears, pineapples, tangerines, butternut squash, pumpkin, peppers, carrots, rutabagas, summer squash, corn, and sweet potatoes.

Include fruits and vegetables like these for a healthy heart and immune system, to protect your eyes from cataracts and macular degeneration, and to reduce your risk of some cancers.

**Red:** Red-skin apples, cherries, cranberries, red grapes, pink grapefruit, red-skin pears, raspberries, strawberries, watermelon, beets, red cabbage, peppers, radishes, radicchio, rhubarb, and tomatoes.

Think red-hot and healthy with these bright foods because they may help with memory, your urinary tract healthy, protect your heart, and reduce risk of some cancers.

So **5 A Day the Color Way** means choosing your fruits and vegetables from all colors to stay healthy and fit.



## Disease Fighters in Colorful Fruits and Vegetables

(Pick up the basket of produce.) What makes these colorful fruits and vegetables a key part of staying healthy and fit as you age (hold up different pieces of produce from basket)? These deeply colored fruits and vegetables supply a wide range of **vitamins** and **minerals**, **fiber** and special disease fighters called **phytochemicals** that your body needs to stay healthy and help fight diseases. Sounds like colorful fruits and vegetables are practically nature's pharmacy. You just have to eat them – **5 A Day the Color Way**.

Colorful fruits and vegetables are the prescription for getting some of the **vitamins** and **minerals** important for older adults:

1. **Vitamin A** for healthy eyes, lungs and skin and to help resist infections.
2. **Vitamin C** for healthy gums, for healing cuts and burns, and to help resist infections.
3. **Vitamin K** for normal blood clotting and healthy bones.
4. **Vitamin E** to protect our body's cells and tissues from damage.
5. **Folate** for healthy red blood cells and a healthy heart.
6. **Calcium** for strong bones and blood pressure control.
7. **Potassium** and **Magnesium** for blood pressure control.

Everyone needs at least one vitamin-A-rich and one to two vitamin C-rich fruits or vegetables each day. You can do this if you eat your **5 A Day the Color Way**.

## Fiber

Fiber is another benefit we get from eating fruits and vegetables. Why is fiber important? Fiber helps keep us "regular" by preventing constipation. Diets high in fiber can help lower cholesterol and reduce risk of some cancers. Fiber works best when you drink plenty of fluids, so drink eight glasses (two quarts) of water or other fluids every day.

Older adults should eat between 21 grams and 30 grams of fiber daily (*21 grams/day for women age 51 and older; 30 grams/day for men age 51 and older; NAS 2002*). If you eat 5 or more servings of fruits and vegetables daily and choose whole grain foods, you'll get enough fiber and won't have to count exactly how many grams you are eating each day.

## Phytochemicals

Now, the vitamins, minerals and fiber that fruits and vegetables supply are very important. But the superstar right now may be the phytochemicals. What are phytochemicals you may ask? *Phyto* means plant in Greek. Phytochemicals are the natural plant compounds that give fruits and vegetables their deep, dark colors (like collards, sweet potatoes, cherries and blueberries), and their distinctive odors (like cabbages, onions, garlic and herbs). They are the very things plants use to protect themselves from pests (*or bugs/insects*) and sun damage. They also protect us when we eat fruits and vegetables. In fact, they may be very strong disease fighters – or



“*phyters*” – and help fight cancer, heart disease, cataracts and diabetes complications (*write on flip chart – phytochemicals: disease “phyters”*). They may also help slow the effects of aging on memory, immune function, and inflammation. Like I said, veggies and fruits are practically nature’s pharmacy. How can you not eat these beautiful and powerful foods? Phytochemicals are also found in grains and beans, but they are not found in vitamin or mineral supplements. So, this is one more reason to choose a wide variety of colorful fruits and vegetables every day rather than depending on only a few foods or on vitamin tablets.

### Finding Five

Remember the Food Guide Pyramid? Where are the fruits and vegetables found? (*as part of the base layers; point out if have poster or handout available*) How many servings of fruits and vegetables are recommended? (**5 to 9 servings every day**) How can you tell which fruits and vegetables are disease fighters? (**the most colorful ones – 5 A Day the Color Way**) What does 5 or more servings of fruits and vegetables look like? It is not as much as you think. Let’s look at what an actual serving size is (*Use food models or real foods to show serving sizes*):

1. **One fruit serving =**

- a. 1 medium-sized piece of fruit (an apple or orange the size of a tennis ball).
- b.  $\frac{3}{4}$  cup (6 ounces) 100% fruit juice (diabetes serving size =  $\frac{1}{2}$  cup or 4 ounces).
- c.  $\frac{1}{2}$  cup frozen, canned, or fresh cut-up fruit.
- d.  $\frac{1}{4}$  cup dried fruit.

2. **One vegetable serving =**

- a.  $\frac{1}{2}$  cup raw or cooked vegetables.
- b.  $\frac{3}{4}$  cup (6 oz) 100% vegetable juice.
- c. 1-cup raw, leafy vegetables (like lettuces, spinach).

How can you make more colorful choices and eat **5 A Day the Color Way**? (*Refer to “Eat Your Colors The Easy Way” handout. Use food models and paper plates/bowls and let a couple volunteers build colorful meals.*)

1. **Have two servings at breakfast:**

- a. Drink a glass of 100% orange, cranberry or tomato juice with breakfast.
- b. Top cereal or pancakes with berries or sliced bananas.
- c. Scramble eggs with chopped vegetables.
- d. Have a smoothie made with fresh, frozen or canned fruit.

2. **Choose two different colored vegetables at lunch and supper:**

- a. Eat salads with Romaine lettuce, dark leafy lettuce or spinach instead of iceberg lettuce; top salads with chopped, colorful veggies.
- b. Try baked or mashed sweet potatoes instead of white potatoes.





- c. Stir colorful mixed veggies into soups, stews or casseroles.
- d. Have spaghetti with tomato sauce (stir in extra vegetables also).
- e. Treat yourself to a fruit salad for dessert.
- f. Season foods with onions, garlic, chives, parsley or other herbs, and peppers.

### 3. Have colorful, healthy snacks:

- a. Grab apples, grapes, oranges, pears or peaches for quick snacks.
- b. Make a smoothie with fresh, frozen or canned fruit.
- c. Munch on raw veggies and lowfat dip.
- d. Try dried fruit with nuts and dry cereal.

### Seasonal Fruits and Vegetables

Take advantage of seasonal produce for best flavor and better prices. You can usually get most fruits and vegetables throughout the year, but they can be more expensive when they are not in season. Canned and frozen produce or dried fruits are just as nutritious as fresh. They are convenient and are usually better priced than off-season produce.

Compare prices for ready-to-eat produce like bagged pre-washed salads or pre-cut veggies with whole produce. Sometimes the prices are not too bad when you consider the time you spend and the produce you waste when you prepare your own. Let's take a look at the handout, "Getting the Most for Your Money."

Let's review. How can you stay healthy and fit? **Eat 5 A Day the Color Way – 5 to 9 servings of colorful fruits and vegetables each day to stay healthy and fit.** What can eating 5 A Day the Color Way do for you? **Help fight cancer, heart disease and the effects of aging on my body.** Now, what are you going to do? **Eat 5 A Day the Color Way!**

### Resources

Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids (Macronutrients). 2002. National Academy of Science, Institute of Medicine. 14 Mar 2003 <<http://www.nap.edu/catalog/10490.html>>.

Duyff, R.L. The American Dietetic Association's Complete Food & Nutrition Guide. Minneapolis, 1996.

Eat Your Colors. The Produce for Better Health Foundation. 14 March 2003 <<http://www.5aday.com/>>.

Joseph, J., Nadeau, D.A., and Underwood, A. The Color Code – A revolutionary eating plan for optimum health. New York, 2002.



Kotschevar, Lendal, Ph.D., and Richard Donnelly. Quantity Food Purchasing, 4th ed. New York: Macmillan Publishing Company, 1994.

Mahan, L.K., and S. Escott-Stump. Foods, Nutrition, & Diet Therapy, 9th ed. Philadelphia: W.B. Saunders Company, 1996.

Molt, Mary, Ph.D. Food for Fifty, 10th ed. New Jersey: Prentice-Hall, Inc., 1997

The Food Stamp Program provides nutrition assistance to people with low income. It can help buy nutritious foods for a better diet. To find out more, contact your local food stamp office, food bank, or senior center.

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### Food Sources of Vitamins

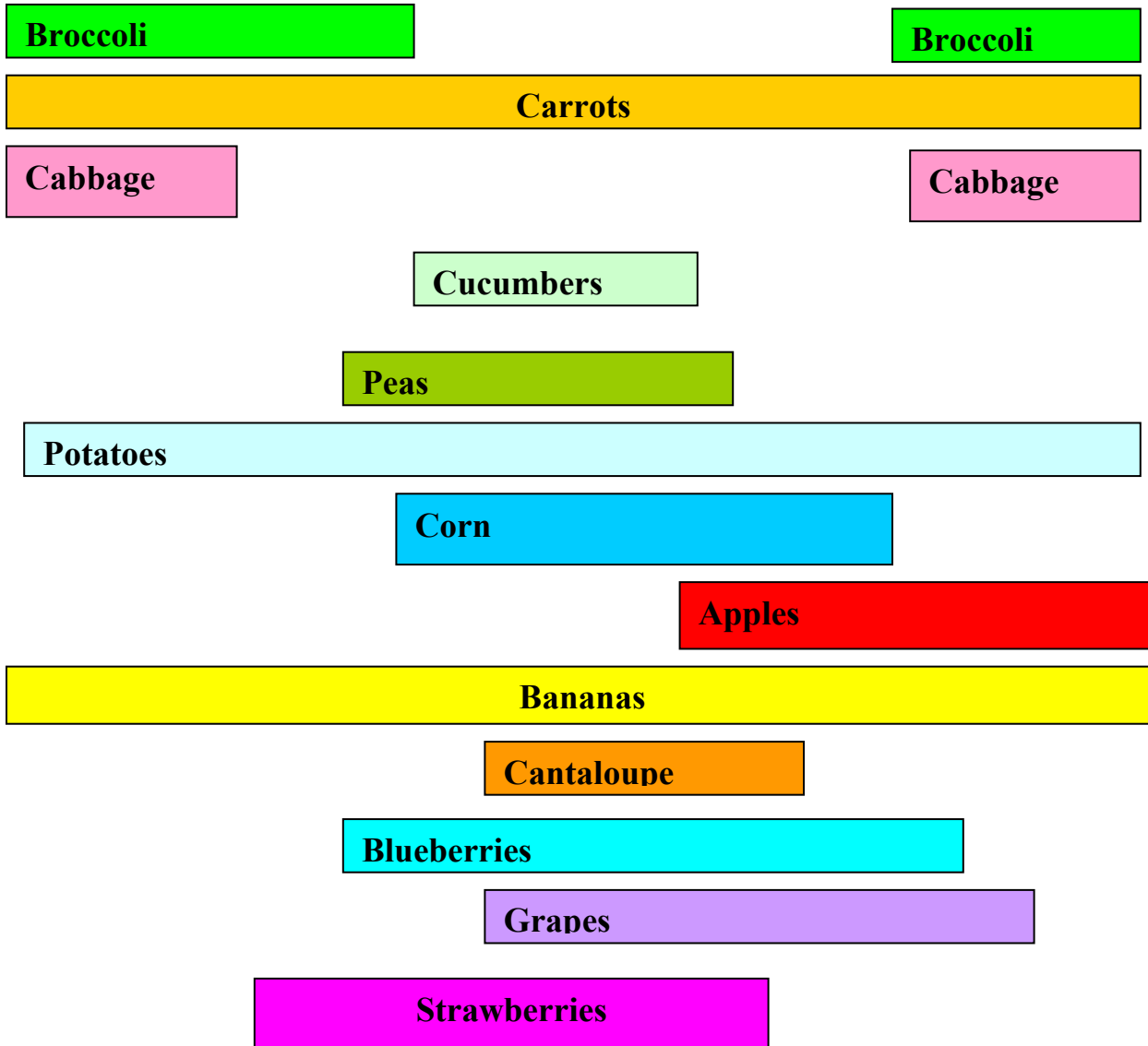
<b>Vitamin</b>	<b>Benefits</b>	<b>Sources</b>	
<b>Vitamin A</b>	Night vision Immune health	Sweet potato Spinach Mangos	Carrots Pumpkin Peppers 
<b>Vitamin D</b>	Bone health	Salmon Sardines Egg yolk 	Milk Liver
<b>Vitamin K</b>	Blood clotting Bone health	Spinach Broccoli Turnip greens	Kale Cabbage Lettuce 
<b>Vitamin C</b>	Antioxidant Immune health	Peppers Broccoli Strawberries 	Oranges Kiwi Tomatoes
<b>Vitamin E</b>	Antioxidant Helps protect blood cells	Vegetable oils Tomato paste Wheat germ	Nuts Seeds Peanut butter
<b>Vitamin B6</b>	Metabolism Energy use	Liver, beef Banana Brown rice	Oatmeal Potatoes 
<b>Folate</b>	Formation of red and white blood cells	Beans/peas Broccoli Okra	Leafy greens Oranges Avocado





## Getting the Most for Your Money When to Buy Seasonal Produce

**Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec**



**Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec**



### Fruits

<ul style="list-style-type: none"> <li>• Apples</li> <li>• Oranges</li> <li>• Grapefruit, Florida</li> <li>• Peaches</li> <li>• Strawberries</li> <li>• Apricots</li> <li>• Plums</li> <li>• Watermelon</li> <li>• Pineapple</li> <li>• Cantaloupes</li> </ul>	<p>Aug - Jan</p> <p>Dec-Mar</p> <p>Oct-Jun</p> <p>Jul-Sep</p> <p>Mar-Apr</p> <p>Jun-Aug</p> <p>May-Sep</p> <p>Jul-Aug</p> <p>Mar-Jun</p> <p>Jun- Aug</p>
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### Vegetables



<ul style="list-style-type: none"> <li>• Broccoli</li> <li>• Cabbage</li> <li>• Carrots</li> <li>• Cauliflower</li> <li>• Sweet Potato</li> <li>• Lettuce</li> <li>• Onion, dry</li> <li>• Bell Pepper</li> <li>• Tomatoes</li> <li>• Cucumbers</li> </ul>	<p>Mar-Apr</p> <p>Jan-May</p> <p>May-Jul</p> <p>Jan-Mar</p> <p>Oct-Feb</p> <p>All year</p> <p>May-Jun</p> <p>Aug-Nov</p> <p>Jul-Oct</p> <p>Apr-Sep</p>
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[http://www.5aday.com/html/colorway/colorway\\_home.php](http://www.5aday.com/html/colorway/colorway_home.php)



## Eat Your Colors The Easy Way 5 Colorful Fruits and Vegetables Each Day

### Have 2 Servings at Breakfast

- Drink 100% orange juice or cranberry juice.
- Scramble eggs with chopped vegetables.
- Top cereal, toast or pancakes with berries.
- Make a smoothie with fresh, frozen or canned fruit.



### Choose 2 Servings at Lunch or Supper

- Choose two different colored vegetables at each meal.
- Make salads with Romaine, dark leaf lettuce or spinach
- Top salads with chopped colorful veggies.
- Treat yourself to fruit salad for dessert.
- Stir colorful mixed veggies into soups, stews or casseroles.
- Add raisins, apples, pineapple or grapes to chicken/tuna salad.
- Have baked or mashed sweet potatoes instead of white potatoes.



### Pick Colorful, Healthy Snacks

- Grab apples, grapes, pears, peaches, or plums.
- Munch on raw veggies and lowfat dip.
- Top berries, peaches or melon with yogurt or cottage cheese.
- Try dried fruit with nuts and dry cereal.





## Garden Vegetable Slaw

2 cups shredded cabbage	2 tsp Dijon-style mustard
½ cup raw broccoli flowerets	2 Tbsp olive oil
¼ cup chopped celery	2 Tbsp vinegar
½ cup cherry or grape tomatoes	1 tsp garlic powder

1. Combine cabbage, broccoli, celery and tomatoes in a large serving bowl.
2. Wisk together oil, vinegar, mustard and garlic powder in small bowl. Pour over vegetables and stir to mix well. Refrigerate before serving to allow flavors to blend. Makes 4 servings.

**Nutrition Facts per serving:**

Total calories

**Serving size: about ¾ cup**

79

Total fat

7 g

Total carbohydrate

5 g





Name:	County:
Date:	Age:

### Fruits and Vegetables Questions

Please Circle Your Answers

- I learned something new today.  
No      Yes
- I eat five fruits and vegetables each day.  
No      Yes
- I will wash my fruits and vegetables in water before I eat them.  
No      Yes
- Circle the vegetables that you enjoy eating:  
Green beans      Turnip Greens      Carrots  
Broccoli      Cabbage      Tomatoes      Sweet Potatoes  
Spinach      Cauliflower      Cucumbers
- Circle the fruits that you enjoy eating:  
Oranges      Apples      Grapes      Pineapple  
Bananas      Peaches      Strawberries  
Watermelon      Cantaloupe      Apricots