**Introduction**

“A diet rich in fruits and vegetables provides vitamins and minerals, important for supporting growth and development, and for optimal immune function.

Most fruits and vegetables are low in calories and fat making them a healthy choice anytime. They may also contain phytochemicals (fight-o-chemicals) that work together with fiber to benefit your health. Different phytochemicals are found in various fruits based on their color—that’s why it’s so important to put a rainbow on your plate.

Filling half your plate with a colorful variety of fruit and vegetables every day is key to developing a healthy lifestyle. Colorful fruit and vegetables provide a wide range of the vitamins, minerals, fiber, and phytochemicals our bodies use to stay health and energetic. They also help us maintain a healthy weight, protect us against the effects of aging and reduce the risk of cancer, heart disease, high blood pressure and other chronic disease**.**”

This information was obtained directly from the Let’s Go Main Website visit <http://www.letsgo.org/wp-content/uploads/5Brochure_English.pdf>

**First we need to define fruits and vegetables**. The simplest definition is: a fruit is a seed-bearing structure that develops from the ovary of a flowering plant, whereas vegetables are all other plant parts, such as roots, leaves and stems… seedy outgrowths such as apples, squash and tomatoes are all fruits, while roots such as beets, potatoes and turnips, leaves such as spinach, kale and lettuce, and stems such as celery and broccoli are all vegetables. (copied from <http://www.livescience.com/33991-difference-fruits-vegetables.html>).

But, it gets more complicated when chefs are using the words, and then a vegetable may scientifically be called a fruit, but called a vegetable by a chef. Tomatoes, squash, and eggplants are scientifically a fruit but are called vegetables by a chef since their flavor is not sweet, but instead “savory”. (from <http://www.livescience.com/33991-difference-fruits-vegetables.html>).

**Five or more fruits and vegetables overview:**  Participants will learn about the nutritional value of fruits and vegetables and the importance of eating five or more fruits and vegetables a day.

**Five or more fruits and vegetables objectives:**

* Identify a variety of fruits and vegetables
* Identify strategies on how to incorporate 5 fruits and vegetables or more a day
* Use the concept of eating a “rainbow” of fruits and vegetable colors everyday
* Teach participants the important role that fruit and vegetables play in maintaining good health
* Encourage participants to develop healthy eating habits that include more fruits and vegetables
* Increase knowledge about different parts of a plants
* Inform participants about the importance of “eating a rainbow” (a variety of fruits and vegetables)
* Inform participants about the different nutrients available in fruits and vegetables

**Five or more fruits and vegetables activities:**

* + Know your fruits and vegetables (page)
	+ Gardening and nutrition (page)
	+ (page)
	+ Let’s taste! produce feature: bell peppers (page)
	+ Put a rainbow on your plate (page)
	+ Create a healthy snack or smoothie (page)

**Five or more fruits and vegetables section resources**

<http://www.letsgo.org/wp-content/uploads/5Brochure_English.pdf>

<http://www.pbhfoundation.org/pub_sec/edu/cur/rainbow/>

**Purpose:** The purpose is to teach participants that fruits and vegetables can be grouped by color and to educate participants on the need to eat fruit and vegetables from all the five color groups to stay healthy.

***Know your fruits and vegetables (Grades 4-6)***

**Estimated duration time:** 30-40 minutes

**Materials needed:**

* white board
* healthy reward (pencil, early release, snack)
* large poster board paper
* writing utensils
* markers
* know your [fruits and vegetables worksheet](http://www.pbhfoundation.org/pdfs/pub_sec/edu/cur/rainbow/RainbowOnMyPlate_ClassActivitiesFINAL.pdf)
* additional [activity sheets](http://www.pbhfoundation.org/pdfs/pub_sec/edu/cur/rainbow/RainbowOnMyPlate_Activities%20FINAL-1.pdf)

Discussion

* Talk about fruit and vegetables that come in different colors, such as peppers (red, green, yellow, purple) and grapes (green, red, purple).
* Talk about classifying fruit and vegetables by the part we eat. For example, bananas are part of the white group because we eat the white fruit, not the yellow skin.
* Green apples are a part of the green group because we eat green skin.

**Peppers**—red, green, yellow, blue/purple

**Pineapple**—Yellow/orange

**Broccoli**—Green

**Grapes**—green, red, blue/purple

**Kiwifruit**—yellow/orange, green

**Apples**—red, green, yellow/orange

**Endive**—green

**Okra**—green

Use the additional [activity sheets](http://www.pbhfoundation.org/pdfs/pub_sec/edu/cur/rainbow/RainbowOnMyPlate_Activities%20FINAL-1.pdf) to supplement and engage participants.

***Activity 1: Know your fruits and vegetables (Grades 4-6)***

**Total duration time:** 30-40 minutes

**Materials:**

* white board
* healthy rewards (pencil, early release, snack)
* large poster board
* paper
* writing utensils
* markers

Challenge participants to think about fruits and vegetables they ate yesterday.

**ASK** participants:

1. *What were they?*
2. *What colors were they?*
3. *Did they fill half their plate with fruit and vegetables at every meal?*

Divide the group into two teams, taking turns you will quiz each team on their knowledge about fruits and vegetables. Then use the statements to initiate a discussion. Each team gets a point for the correct answer (use the white board to track points), the team with the most points wins. Encourage teams to explain why they agree or disagree with each statement.

*Worksheet Answer Key*

|  |  |  |
| --- | --- | --- |
| *Statement* | *True/False* | *Discussion*  |
| 1. USDA Myplate recommends that you fill half your plate with fruit and vegetables every time you eat away from home.
 | **True** | Specially, USDA recommends you make half your plate fruit and vegetables, at least half grains whole grains, and switch to fat free or low fat milk. |
| 1. Fruit and vegetables contain vitamins and minerals.
 | **True** | Many of the phytochemicals and other compounds that make fruit and vegetables good for us give them their color. That’s why it’s essential to sample five color groups every day to get the full preventative benefits of fruit and vegetables. |
| 1. Phytochemicals (pronounced fight-o-chemicals) help keep people healthy and give plants their color.
 | **True** | Many of the phytochemicals and other compounds that make fruit and vegetables good for us also give them their color |
| 1. Fruit and vegetables can be grouped by color
 | True | fruit and vegetables can be classifies into five color groups—Blue/Purple, Green, White, Yellow/orange and Red |
| 1. Bananas belong to the yellow/orange color group.
 | **False** | Only the skin of the banana is yellow. The part you eat is white and that is what counts. |
| 1. Grouping fruit and vegetables by color is easy way to remember to eat a variety of them every day.
 | **True** | Since the different color groupings give us different nutrients our bodies need, you should eat from each group every day. You should try to eat different fruit and vegetables within each group, too. |
| 1. Eating fruit and vegetables from each of the five color groups and exercising will help you stay healthy and fit.
 | **True** | It’s not enough to just eat your colors every day. Physical activity is an important part of a healthy lifestyle. It helps make your muscles strong, helps you maintain a healthy weight, keeps your body fit, and makes you feel good. |
| 1. Fruit and vegetables come in a variety of different forms.
 | **True** | Fruit and vegetables come in a variety of different forms: fresh, juice, frozen, canned and dried. |
| 1. The best way to get vitamins minerals, and other essential nutrients our bodies need is by taking vitamins and other supplements.
 | **False** | The best way to get nutrients your body needs is through the food you eat. Vitamins, minerals, and phytochemicals work together naturally in a way supplements can’t. Remember to eat a balanced diet that includes a colorful variety or fruit and vegetables every day. |
| 1. It’s easy to add to color diet every day
 | **True** | Simply add colorful fruit and vegetables every meal or snack. Trying adding sliced bananas or berries to your cereal, put some baby spinach on your sandwich and grab a handful of baby carrots for a snack. |

**Wrap-up discussion:**

Ask for ways to include fruit and vegetables into their daily diets. Give each group 5 minutes—have each group choose 3 strategies to report to the class. Write each team’s responses on the poster board. Keep the poster and share your strategies with Healthy By Design.

**Additional activity:** During the summer, take the participants to the various places that sell or grow food and talk about cost, food sources and variety: grocery store; community garden, farmer’s markets (including the [Healthy By Design Gardeners’ Market](http://www.healthybydesignyellowstone.org/initiatives/gardenersmarket/)).

***Five fruits or more vegetables: Know your fruits and vegetables* resources**

1. <http://www.pbhfoundation.org/pub_sec/edu/cur/rainbow/>
2. <http://www.pbhfoundation.org/pdfs/pub_sec/edu/cur/rainbow/RainbowOnMyPlate_TeachersGuide%20FINAL.pdf>
3. <http://www.idph.state.ia.us/IDPHChannelsService/file.ashx?file=0EDD6425-7E28-4C51-B093-E4E00FDB07CD> (Pages 4-5)

**Purpose**: To learn the origin of food and what humans and plants need for survival? Participants will learn about the parts of plants with emphasis on those that we eat.

***Gardening and nutrition education (adaptable for Grades 4-6)***

**Total duration time:** 30 min. (prep work is required before the activity)

**Materials needed:**

* Handouts: 1-4 My Seeds and My Predictions 1-5 Mini-Greenhouse Care Chart (one copy/class) [activity sheets](http://www.cde.ca.gov/ls/nu/he/documents/ntgo2013lesson1.pdf)
* Mini-greenhouses (72 cells/tray; one tray/class) — see “Additional Activities” for other greenhouse options
* Potting soil mix (two bags, 3–5 lb. each)
* Seeds (check with a master gardener or local nursery for crops that would be successful in your area)
* Hand shovels or trowels
* Plastic tarp
* Wooden popsicle sticks
* Permanent marker
* Adhesive tape or glue
* Paper towels
* Spray bottle

 **Day before the activity checklist:**

* Photocopy handouts [1-4 and 1-5](http://www.cde.ca.gov/ls/nu/he/documents/ntgo2013lesson1.pdf)
* Discuss with the participants which fruits and vegetables they would like to grow. Guide students to plants that can be grown locally due to soil, climate, and growing seasons.
* Gather materials
* Cut each mini-greenhouse tray into eight smaller trays
* Moisten potting soil with water in a small bucket; keep about one cup of the mix completely dry and get one cup soaked (for demonstration purposes)

**Just before the activity checklist:**

* Set up for the gardening activity in a corner of the
* room (tarp, greenhouses, soils, seeds, handouts)

**ASK** participants:

1. *What did you eat for breakfast or lunch?* Make columns on chalk or white board.
2. *Which part of the plant does the food listed come from.* Next to each food, have participants note whether the food came from a plant or animal.

If time allows have a taste test party that includes foods from different parts of the plant. Have the participants discuss and/or record which part of the plants they prefer and why.

**Gardening Activity**

Become a food producer! First, decide what seeds you will plant. Check with local master gardeners, farm advisers, nurseries, or the plant­ing guides for your region.

Consider the climate, time of planting, and the time of harvest. Then decide which crops you would like to harvest at the end of the project. Healthful snack recipes may give you some ideas as to which seeds to plant. Some seeds need to be started in small containers and then transplanted outdoors when they have grown a couple inches (e.g., broccoli, leafy greens); other plants do better when seeded directly into the ground from which they will be harvested (e.g., carrots, radishes). If seasonal/climate factors are an issue consider an indoor greenhouse set-up.

In this group activity, participants will plant seeds in a mini-greenhouse tray. Before starting the activity divide participants up into four groups. Have participants/students read the seed packages and ask questions if they have them.

**Step 1:** Fill the cells loosely with soil. Do not pack the soil down tightly or else the seeds will suffocate. The soil must not be too soggy or too dry. (Bring in soil samples that are too wet and samples that are too dry.)

**Step 2:** Plant seeds, but not too deep. Read the seed packets to determine the number of seeds per cell and the planting depth. (You will almost always plant one seed per cell for transplant purposes.) Do not pack the soil down; the seeds need air.

**Step 3:** Label the tray by writing the seed name on a popsicle stick and taping or gluing on some seeds.

Explain the importance of checking the plants daily. Keep track of progress on the Mini-Greenhouse Care Chart (handout 1-5).

**(Grade 6-12)**

This activity can easily become a science experiment. Have the participants set up different environments and make predictions about what might happen to the seedlings. The participants can put photo­synthesis to the test. Always include at least one tray that gets the conditions noted on the seed packet--this group, called the *control group,* will provide your class with some plants that can be transplanted outdoors in a few weeks. The *experimental group* is the one that has a single feature different from the seed packet. Have the participants keep track of their experiments for at least two to four weeks and record any differences observed between the experimental and control groups. The following are suggested experiments:

1. Skip one of the garden steps listed above or perform a step out of order. What effect would it have on the growth of the plant?

2. Place a dark lid over one section of the greenhouse so that no light will get in, but is sure to continue watering the plants on the same schedules for both the control and experimental groups. Can the plants grow without any light at all?

3. Place a dark lid over one section of the greenhouse so that no light will get in; this time, cut a one-inch hole in one side of the lid. Make sure you still continue watering the plants when nec­essary. In which direction will the plants grow? (Participants can notice phototropism at work.)

4. Do not water one section of the greenhouse at all (under watering), but continue to provide adequate light. What happens to the seedlings?

5. Water one section of the greenhouse twice a day (overwatering), and continue to provide adequate light. What happens to the seedlings?

6. How might the temperature affect the growth of the seedlings? How might sound affect the growth of the seedlings?

**Wrap-up discussion:** Have participants write and/or illustrate a story about their planting experience.

***Gardening activity resources***

1. <http://www.cde.ca.gov/ls/nu/he/documents/ntgocomplete.pdf>
2. <http://www.cde.ca.gov/ls/nu/he/nrttogrow.asp>
3. <http://www.cde.ca.gov/ls/nu/he/documents/ntgo2013lesson1.pdf>
4. http://www.kidsgardening.org/

**Purpose:** Participants explore different features of various colored peppers.

***Let’s taste! produce feature: bell peppers Grades k-6)***

**Estimated duration time:** 45 minutes to 1 hour

**Materials needed:**

* Name Tags
* Bell Peppers (four of each variety)
* Paper Plates, Black Marker
* Knife
* Napkins
* Toothpicks
* Participants Notebooks or paper
* Colored Pencils
* Pens
* A variety of Bell Peppers (Read, Green, Yellow, Purple)
* Pepper Preference Survey Pictures included in directions

**Preparation:**

* Review activity plan
* Review teacher background information
* Chop bell peppers for introduction sensory activity

**ASK** participants**:**

1. *How do bell peppers taste? Sweet, sour, spicy?*
2. *What colors peppers have you seen?*
3. *What colors can bell peppers be? Red, green, orange, yellow, purple, white, told.* (Red, yellow and orange peppers are ripened green peppers. As the green pepper stays on the vine it changes colors and becomes sweeter). Bell peppers can be used with different foods…salads, raw, vegetable dips, stir fry, pasta etc.

**Bell Pepper Facts: Background Teaching Information**

**Bell Pepper Nutrition:** Red bell peppers have more beta carotene and are more nutrient dense then their green counterparts. All bell peppers are high in vitamin C and Vitamin A, however red bell peppers contain more than twice as much vitamin C than green peppers. Red bell peppers have vitamin C content more than double that of a large citrus fruit (orange). They also are a source of vitamin B6, folic acid, and [fiber](http://www.newworldencyclopedia.org/entry/Fiber). Red peppers also contain [lycopene](http://www.newworldencyclopedia.org/entry/Lycopene), which has been shown to reduce the risk of certain [cancers](http://www.newworldencyclopedia.org/entry/Cancer) (prostate cancer, cancer of the cervix, bladder, and [pancreas](http://www.newworldencyclopedia.org/entry/Pancreas)). Studies support the view that bell peppers have a protective effect against cataracts, rheumatoid arthritis, and lung cancer.

**Uses**

Bell peppers are commonly used in Italian and Asian cuisines. The may be eaten cooked or raw.

**Fun Facts**

* Bell peppers have no "bite" at all. Bell peppers have a mild tang and a crunchy texture that makes them suitable for eating raw.
* A bell pepper is a fruit, not a vegetable.
* The green pepper is the most common pepper sold in the United States.

**Bell Pepper Varieties**

Bell peppers can be found in a variety of colors including: green, red, yellow, orange, purple, gold, and white. The orange, yellow, and red peppers are ripe versions of the green pepper. As bell peppers ripen on the vine, they become red and have a sweeter taste.

**Growing Cycle**

Today, bell peppers are primarily grown in China, Turkey, Spain, Romania, Nigeria, and Mexico. However, they are also found in California, New Jersey, and Florida. They are sensitive to extreme temperatures (>100°F) and grow in climates with day temperatures between 75-85° F.

***Let’s taste! produce feature: bell peppers activity***

**Have participants conduct a taste test!**

1. Depending on your budget and supplies available, divide students into groups each with a plate for each colored pepper.
2. For each colored pepper, place a whole pepper, ½ pepper, and individual slices for students to sample on a plate.
3. Have students sample an individual slice of each colored pepper. Within each group of students have them talk about the flavor, texture and any other characteristics they choose and fill in the table.

**Drawing and Tasting Table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Bell Pepper** | ☺ of ☹ for flavor | Description (at least three adjectives)  | Ideas for using in a meal? | What you liked the most about the pepper |
| Color? |  |  |  |  |
| Color?  |  |  |  |  |
| Color?  |  |  |  |  |
| Color |  |  |  |  |

**Wrap-up discussion:** Allow participants to share what they liked or disliked about tasting the peppers.

Also ask participants to share some ways they might incorporate more fruits or vegetables from the rainbow.

Ask if the peppers are actually fruits and or vegetables? <http://www.livescience.com/33991-difference-fruits-vegetables.html>

Use the background information below to help facilitate the conversation.

***Let’s taste! produce feature: bell peppers resources***

1. <http://www.dole.com/SuperKids/Encyclopedia/Facts/tabid/831/Default.aspx?contentid=2509>).
2. <http://www.newworldencyclopedia.org/entry/Bell_pepper>
3. <http://www.marylandpublicschools.org/NR/rdonlyres/3DE1552A-7CD1-48C1-B0C5-569F27B6B958/6251/1swbellpeppersflyer.pdf>
4. <http://www.extension.iastate.edu/healthnutrition/foodrecipeactivity/food/bell_pepper.htm>
5. <http://www.fns.usda.gov/snap/>

 **Propose:** To increase knowledge about fruit and vegetables and to encourage participants to fill their plates with colorful nutrient rich foods.

***Taste the rainbow flavor (Grades K-3)***

**Estimated total duration time:** 1 hour

**Materials needed:**

* [Background information](http://www.kidsgardening.org/node/12194)
* plant part chart (below)
* dry erase board and markers
* variety of fruits and vegetables
* small cups
* toothpicks
* napkins
* knife and cutting board (for instructor use only)

**ASK** participants:

1. *Why is it important to eat fruits and vegetables? (They provide vitamins and minerals that we cannot live without.)*
2. *Do all fruits and vegetables have the same nutrients? (No.)*
3. *Since they are different what does that mean?* (We need to eat a variety of fruits and vegetables to get all the necessary vitamins and minerals.)
4. *Do you think fruits and vegetables provide benefits other than vitamins and minerals? (Yes they do. They also provide fiber and phytonutrients.)*

***Taste the rainbow flavor activity (K-3)***

Talk about the importance of eating a variety of fruits and vegetables for maximum health benefits “eat the rainbow.” Explain how fruits and vegetables provide important nutrients, plant pigments (phytonutrients and phytochemicals) do more than just colors to fruits and vegetables—they also protect your health. Fill in the table with the actual produce collected. For example:

**Participant/Group Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |
| --- | --- | --- | --- |
| **Color** | **Raw/Cooked** | **Flavor** | **Try Again?** ☺ ☹ |
| Red1.strawberries2.tomatoes |   |   |    |
| Orange1. orange 2. carrots |   |   |   |
| Yellow 1. pineapple 2. yellow peppers |   |   |   |
| Green1. Broccoli 2. Kiwi |   |   |   |
| Blue1. Blueberries2. Grapes |   |   |   |
| Purple1. Raspberries 2. Eggplant |   |   |   |

1. Introduce participants to the idea of a tasting activity by telling them there are people in the world who have the job of sampling new vegetable and fruit varieties before the seeds are sold to gardeners and farmers, or testing foods that companies package for market. Tell them they’ll be playing the role of food tasters during the tasting activity, and like real tasters, will rate flavors, using descriptive words as mentioned above. They’ll also note if they’d be willing to eat each food again.
2. Collect fruits and vegetables for the participants to taste. Participants can sign up to bring in an item (enough for each child in class to have a taste), arrange with your cafeteria to provide some items, or contact local grocery stores for donations. Each color should be represented by at least two options. Serve each food by itself, either raw or cooked (as much as possible, try to serve fresh foods rather than canned or frozen foods).
3. Clean fruits and vegetables thoroughly. Cut each item into bite-sized pieces as necessary. Provide toothpicks, paper cups, and napkins for participants to use during the tasting.
4. After the tasting exercise, lead a discussion and fill in the classroom chart with the data participants collected.
5. Ask if this exercise helped any of them discover new flavors that they want to try again.

**Wrap-up Discussion:** Ask participants what they liked the most and why, ask them to identify three fruits or vegetables they will ask their parents/guardians to incorporate into their meals.

***Taste the rainbow flavor activity* *with plant parts added* (G*rades 4-6)***

**Total duration time:** 1 hour

**Materials needed:**

* [Background information](http://www.kidsgardening.org/node/12194)
* plant part chart (below)
* dry erase board and markers
* variety of fruits and vegetables
* small cups
* toothpicks
* napkins
* knife and cutting board (for instructor use only)

Discussion:

1. *Why is it important to eat fruits and vegetables each day?*Fruits and vegetables contain different vitamins and minerals that are essential to our bodies.
2. *What are plant parts?* Have a discussion with your class about plant parts, how they serve a plant, and how you identify them. If possible, have a model or poster of the parts of a plant and worksheets for participants to label the plant parts.

Talk about the importance of eating a variety of fruits and vegetables for maximum health benefits “eat the rainbow.” Explain how fruits and vegetables provide important nutrients, plant pigments (phytonutrients and phytochemicals) do more than just add colors to fruits and vegetables—they also protect your health.

The plant parts include:

**Roots:**found underground; absorb water and nutrients for growth; store food for plant

**Stems:** connect leaves to roots; carry water and nutrients from roots to leaves, and carbohydrates and other things from leaves to roots for growth; some provide food storage

**Leaves:** catch the sun, which gives plants energy to grow through photosynthesis; obtain and release moisture and oxygen

**Flowers:** where fruits/seeds form

**Fruits:** contain seeds

**Seeds:**form inside fruit; when put in soil, grow into a new plant

**Taste the rainbow flavor Activity**

1. Introduce phytonutrients and fiber, and other health benefits associated with eating produce. Explain that all fruits and vegetables contain different amounts of vitamins, minerals, fiber, and phytonutrients, and eating a lot of different types of fruits and vegetables is important to staying strong and healthy.
2. Introduce the concept of eating a rainbow from the background information. Explain how the different colors of the fruits and vegetables indicate that they contain different vitamins, minerals, and phytonutrients, and that by eating all different colors, you are also getting all the different nutrients.
3. Lead an informal discussion about fruits and vegetables the participants like, those they don’t like, and those they’ve not tried. As they talk about various foods, encourage them to use descriptive words such as “sweet,” “tangy,” or “spicy” rather than “yucky,” “okay,” or “awesome.”
4. Set up a chart on your whiteboard or chalkboard Ask participants to help fill in the blanks with names of vegetables and fruits that match these colors. (We list fruits and vegetables as examples only – let participants come up with their own).

**Participant/Group Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Color** | **Plant Part** | **Fruit or Vegetable?** | **Raw/Cooked** | **Flavor** | **Try Again?** |
| Red1.strawberries2.tomatoes |   |  |   |   |   |
| Orange1. orange 2. carrots |   |  |   |   |   |
| Yellow 1. pineapple 2. yellow peppers |   |  |   |   |   |
| Green1. Broccoli 2. Kiwi |   |  |   |   |   |
| Blue1. Blueberries2. Grapes |   |  |   |   |   |
| Purple1. Raspberries 2. Eggplant |   |  |   |   |   |

5. Introduce participants to the idea of a tasting activity by telling them there are people in the world who have the job of sampling new vegetable and fruit varieties before the seeds are sold to gardeners and farmers, or testing foods that companies package for market. Tell them they’ll be playing the role of food tasters during the tasting activity, and like real tasters, will rate flavors, using descriptive words as mentioned above. They’ll also note if they’d be willing try each food again.

6. Collect fruits and vegetables for the participants to taste. Participants can sign up to bring in an item (enough for each child in class to have a taste), arrange with your cafeteria to provide some items, or contact local grocery stores for donations. Each color should be represented by at least two options. Serve each food by itself, either raw or cooked (as much as possible, try to serve fresh foods rather than canned or frozen foods).

7. Clean fruits and vegetables thoroughly. Cut each item into bite-sized pieces as necessary. Provide toothpicks, paper cups, and napkins for participants to use during the tasting.

**Wrap-up discussion:**

1. Why is it important to eat fruits and vegetables? (They provide vitamins and minerals that we cannot live without.)
2. Do all fruits and vegetables have the same nutrients? (No.) Since they are different what does that mean? (We need to eat a variety of fruits and vegetables to get all the necessary vitamins and minerals.)
3. What are phytonutrients? (Chemicals in plants that provide protection from things in the environment and in our own bodies that can lead to cancer, heart disease, diabetes, and other problems.)
4. In addition to vitamins, phytonutrients, and minerals, what else to fruits and vegetables provide in our diets? (fiber and energy in the form of calories).
5. What is fiber? (The tough parts of plants that we can’t digest). Fiber reduces “bad” cholesterol; helps our bodies balance blood sugar, which is important in prevention of diabetes; keeps our colons clean, protecting them from cancer; helps the body get rid of other excess byproducts; and helps us pass stools/feces easily.)

***Taste the rainbow flavor resources***

<http://www.kidsgardening.org/node/12194>

<http://www.kidsgardening.org/node/12318>

**Purpose:** To teach a creative way to make a simple and easy snack using fruits and vegetables.

***Create a healthy snack (Grades K-6)***

**Estimated total duration time:** 40 minutes

**Materials needed:**

* Kabob sticks (enough for group)
* Washed seasonal fruits and vegetables (include the fruits from all color groups)—strawberries, berries, cucumber, watermelon, celery, cantaloupe, melon, carrots, tomatoes, grapes and so on
* Paper
* Writing utensil

 

**ASK** participants:

1. *What healthy snack they had that they like to eat the most.*
2. *What are your favorite fruits and vegetables?*
3. *Which color group does the fruit or vegetable belong to?*
4. *Have you ever made a fruit or vegetable wand?*

***Create a healthy snack activity (grades k-6)***

Introduce the importance of eating a variety of fruits and vegetables, and work with participants to prepare fruit and vegetable wands.

**Wrap-up Discussion:** Have participants write down some of the fruits and veggies they will ask their parents/guardians to purchase. Ask them why it is important to eat fruits and vegetables. Optional: Prepare and provide handout to share with parents.

***Elizabeth’s Rider’s green smoothie activity (Grades 4-6)***

**Total duration time:** 40 Minutes

**Materials needed:**

* blender
* 1/2 cup mixed frozen berries (or any selection of berries)
* 1/2 frozen banana (peeled)
* Bunch of green vegetables (spinach)
* 1-2 cups spinach
* 2 teaspoons chia seeds
* 15 ounces water
* 1 cup of ice
* Dixie cups
* wooden spoon for additional mixing
* printout of [ingredients and plan](http://www.huffingtonpost.com/elizabeth-rider/green-smoothie_b_5018176.html)

**ASK** participants:

1. *What is a “smoothie”? Why the name?*
2. *What did the smoothie contain, what makes a smoothie good?*
3. *Ask if any of the participants have had a green smoothie*, *if yes what fruits or vegetables did they use to make it green?*

***Create a smoothie activity***

Introduce smoothie and its various components. Explain what the activity is on and each of the important components of the smoothies

Elizabeth Rider, blogger, health coach, wellness expert, and entrepreneur has a great method to construct the perfect green smoothie. \*Information following is removed directly from Elizabeth Riders Online Article “How to Construct the Perfect Green Smoothie” published in the Washington Post on 3/26/2014

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| **Green Smoothie components** | **Discussion points** |
| **The Green Base:** Add 2-3 large handfuls (about 2-3 cups) of leafy greens to the blender | Spinach has a mild flavor so start there if you're a newbie. Kale, collard greens, chard, romaine and green leafy herbs like cilantro, parsley and mint are all great. There are hundreds of types of greens out there -- try any of them and mix things up to find flavor combinations.Cucumbers are also a fantastic green addition to your smoothie for both their high nutrition content and high water content (the green peel is excellent for you, but peel it if it's not organic).Check what’s on sale! |
| **The Fruit:** Add about a cup of low-sugar fruit for extra antioxidants, texture, sweetness and flavor. Berries and stone fruits (think cherries and nectarines) are low in sugar and high in flavor. Half of a banana or 1/4 of an avocado will give your smoothie a super creamy texture. | About 1/2 of a banana ripen will help sweeten the smoothing. To give the smoothie a citrus or zesty taste adds freshly squeezed oranges, margarines, or grapefruit (1/2 to taste). The citrus provides nutrient and immune properties. Elizabeth advises a 2:1 ratio of greens to fruit to keep the sugar content of your drink low. A 3:1 ratio is even better. |
| **The Superfood Add-In:** Next into the blender, add a tablespoon or two of a nut or seed superfood add-in to for even more nutrition, fiber, and a little bit of good fat. | Adding in flax seeds, flax oil, chia seeds, hemp seeds, raw almonds or raw walnuts accomplishes that. Each of those things is full of good omega-3 fats, protein and other nutrients as well. Some of the nutrients in plants -- specifically vitamins A, K, E and D -- are fat soluble, meaning [they need to be accompanied by some fat to be absorbed properly](https://www.purdue.edu/newsroom/research/2012/120619FerruzziSalad.html). |
| **The Liquid:** 15 ounces water or liquid |  water, coconut water or unsweetened nut milk work well in green smoothies low sugar  |
| **The Extras:** | *Too sour:* Add more bananas, grapes, stevia or a few organic (pitted) dates. Just be mindful of how much sugar you're adding*Not green enough*: Also feel free to add in any more veggies if you're feeling adventurous and the spirit moves you (broccoli, anyone?) |

**Blending directions:** Add all ingredients to your blender and blend away. If needed pause and push the ingredients down a few times to help your blender along, pour in smoothie into dixie cups and serve.

**Elizabeth’s Reeder’s Quick Tips:**

* Stick to 2-3 flavor combinations in your drink (think cucumber-mint, cherry-vanilla, etc.) Too many flavors can end up tasting too funky.
* Wash all produce and use organic ingredients whenever possible.
* Blend for about 30-60 seconds at a time until the desired texture is achieved.
* Warm smoothies rarely taste good. Frozen fruit or a few ice cubes go a long way to making your smoothie a tasty treat.
* Your green drink might turn out purple or another wild color from the other ingredients; it doesn't actually have to be the color green to be a green drink.
* Run the blender under hot water right after you pour your smoothie into a glass and let it sit while you drink. Then just rinse it and let it air dry for easy/quick cleanup.

**Elizabeth’s Reeder’s Chia Berry Green Smoothie Recipe**

* 1/2 cup mixed frozen berries (or any selection of berries)
* 1/2 frozen banana (peeled)
* 1-2 cups baby spinach
* 2 teaspoons chia seeds
* 15 ounces purified water
* 1 cup of ice

**Method:** Wash hands, add ingredients and blend all ingredients until smooth; enjoy immediately.

**Wrap-up discussion:** Ask them what the benefits of the fruits and vegetables. Ask them why it is important to create a healthy smoothie that contains a variety of fruits and vegetables. Ask participants what other variation of smoothies they might try using the same measurements with different fruits and vegetables. Share the [Elizabeth Rider Green Smoothie Ingredients](http://www.huffingtonpost.com/elizabeth-rider/green-smoothie_b_5018176.html) and or recipe with participants

***Create a health snack or smoothie resources***

<http://www.fns.usda.gov/sites/default/files/Fruits_and_Vegetables_Recipes.pdf>

<http://www.huffingtonpost.com/elizabeth-rider/green-smoothie_b_5018176.html>