



Resource Manual

Designed to Provide Nutrition Education to Florida's Citizens
The Florida Interagency Food and Nutrition Committee—2007

Members of the Florida Interagency Food and Nutrition Committee (FIFNC)



Florida Area Health Education Centers (AHEC) Network
<http://www.flahec.org>



Florida Department of Agriculture and Consumer Services
<http://www.doacs.state.fl.us>



Florida Department of Children and Families
http://www.myflorida.com/cf_web



Florida Department of Education
<http://www.fldoe.org>



Florida Department of Elder Affairs
<http://elderaffairs.state.fl.us>



Florida Department of Health
<http://floridashealth.com>



University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS Extension) <http://solutionsforyourlife.org>



U.S. Food and Drug Administration
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Overview of Participating Agencies and Programs



The Florida Area Health Education Centers (AHEC) Network is an extensive, statewide system consisting of ten community-based Centers providing education and support for health professionals, students, and the public. Each regional AHEC is supported by a Program Office housed at one of the state's five medical schools. This organizational structure enables each AHEC to draw upon the resources of the academic health center while addressing local issues. The Florida AHEC Network seeks to increase access to primary care while simultaneously meeting the needs of medically underserved and under-represented populations in our State. AHEC's initiatives are designed to: offer youth opportunities to explore careers in health professions; coordinate clinical training experiences for medical and health professions' students in rural areas, provide education and support for health providers in rural communities, and provide education programs for the public that promote health and prevent disease. Learn more about these programs and services at: www.flahec.org.



The Florida Department of Agriculture and Consumer Services is the largest state Department of Agriculture in the country. It is responsible for the safety of Florida's food supply, and works with the U.S. Department of Agriculture (USDA) in providing food commodities to needy citizens through its Bureau of Food Distribution. The department is involved in a myriad of programs with various state, federal, and private partners to improve the nutrition of Floridians by promoting a greater reliance on fresh fruits and vegetables in the diet of citizens. These programs include the department's Fruits & Veggies—More Matters®, Fresh2U, and Eat Your Colors programs.

Through the establishment of communication, service, and delivery systems, the Bureau of Food Distribution ensures that USDA-donated commodities and recovered produce are made available to eligible recipients. The bureau administers or provides support to five USDA programs in Florida: National School Lunch Program; Summer Food Service Program; Emergency Food Assistance Program; Charitable Institutions; and Disaster Feeding. Learn more about these programs at: www.doacs.state.fl.us.



The Florida Department of Children and Families, ACCESS Florida Program administers the state's Food Stamp Program. Food Stamps are the first line of defense against hunger. Low-income families can use food stamps to purchase nutritious eligible food items with Electronic Benefits Transfer debit cards at USDA authorized retail food stores. For information regarding the Food Stamp Program in Florida, visit the Department of Children and Families at: www.dcf.state.fl.us/ess/ or call toll-free: 1-866-762-2237.



The Florida Department of Education, Coordinated School Health Program (CSHP) is funded through a cooperative agreement with the Centers for Disease Control and Prevention (CDC). CSHP enables the Department of Education and the Department of Health to collaborate with other programs statewide to promote the health and well-being of Florida's school children. CSHP utilizes an eight-component model consisting of: Health Education; Physical Education; Health Services; Nutrition Services; Counseling, Psychological & Social Services; Healthy School Environment; Health Promotion for Staff; and Family & Community involvement. To learn more visit: www.fldoe.org/bii/instruct/health or call the toll-free number: 1-866-312-6497.



The Florida Department of Education, Food and Nutrition Management is committed to facilitating quality nutrition programs that support the growth and development of Florida's children. Food and Nutrition Management (FNM) administers the National School Lunch and School Breakfast Programs in Florida public schools, private schools, and residential child care institutions (RCCIs); the Summer Food Service Program; and the Special Milk Program. Program administration involves: reimbursement of federal program funds to

Overview of Participating Agencies and Programs (continued)

participating school districts for meals served in schools; assistance in special marketing projects and procurement to promote more nutritious habits; on-site compliance monitoring, training and technical assistance; School Meals Initiative, and the Food and Nutrition Resource Center. Learn more at: www.firn.edu/doe.frm/.

The Florida Department of Education's Food and Nutrition Resource Center is your lending library for nutrition education materials. The collection of more than 2,000 items covers a wide range of nutrition education topics. These items include videos, lesson plans, posters, kits, models, games, curriculum guides, puppets, reproducibles, and U.S. Department of Agriculture (USDA) materials—everything the educator/trainer needs. Although the focus of the Center is teachers and nutrition professionals, materials may be borrowed by interested parents and child care providers. The Resource Center also has the most recent publications and resources distributed by the USDA Team Nutrition, the National Food Service Management Institute (NFSMI), and other public and private organizations. All services of the lending library are free and have a four-week loan period. Once requested, materials are sent by mail and a return postage sticker is provided for their free return. Call or e-mail the Resource Center to receive a free catalog. Toll free number: 1-800-504-6609. E-mail: britton.doner@fldoe.org. You may view the catalog at: <http://doehealthlibraries.cites.fsu.edu>.



The Florida Department of Elder Affairs, Nutrition and Wellness Programs include the following:

Adult Care Food Program, U.S. Department of Agriculture, Food and Nutrition Service (USDA/FNS)—This program provides reimbursement to eligible Adult Day Care Centers to assist them in providing nutritious meals to adult day care participants. Centers using this program help maintain participant's nutritional status while keeping food costs down.

Elder Farmers' Market Nutrition Program, USDA/FNS—This program promotes the increased intake of fresh fruits and vegetables by providing Farmers' Market coupons to low-income elders. These coupons can be exchanged for locally grown, fresh fruits and vegetables at participating Farmers' Markets.

Older Americans Act (Title III-C) Nutrition Services—Florida's nutrition programs provide over 12 million congregate and home delivered meals per year to elders in Florida. These programs provide nutrition screening, nutrition education, and nutrition counseling services, as well as provide a critical link between elders and their communities.

Older Americans Act (Title III-D) Wellness Programs—This program provides disease prevention and health promotion programs and activities, including nutrition education and nutrition counseling for elders, with priority given to those elders who are medically underserved and have the greatest economic need.

To learn more about the services and programs of the Florida Department of Elder Affairs visit <http://elderaffairs.state.fl.us/> or call toll free 1-800-963-5337 (1-800-96-ELDER) for Florida's Information and Referral Service for Elders.



The Florida Department of Health, Bureau of Child Nutrition Programs and related After School Snack Program and Homeless Children Nutrition Program are administered by the Bureau of Child Nutrition Programs. They provide nutritious meals and snacks through public-private partnerships with organizations committed to caring for children. All three programs are funded by the USDA, Food and Nutrition Service. See the Child Care Food Program at: www.doh.state.fl.us/ccfp.



The Florida Department of Health, Bureau of Chronic Disease Prevention and Health Promotion, Obesity Prevention Program is funded by the Centers for Disease Control and Prevention (CDC) to encourage an increase in fruit and vegetable consumption and decrease of sugar sweetened beverages, promotion of physical activity, portion control, a reduction in television viewing time, and promotion of breast feeding to prevent overweight and obesity. The program teaches behavior strategies that promote lifelong physical activity and healthy nutrition.

Overview of Participating Agencies and Programs (continued)

The Obesity Prevention Program has been actively involved in creating leadership and awareness about the obesity issue. The following initiatives have emerged: the Governor's Council on Physical Fitness (currently creating a state plan of action to promote physical fitness and healthful nutrition to all Floridians); creation of www.healthyfloridians.com; four Obesity Summits that have promoted evidence-based research and practices for worksites, schools, health care, families, communities, and faith-based organizations; the Hispanic Obesity Prevention Education program; promotion of the Fruits & Veggies—More Matters® campaign; “Step Up, Florida!” nutrition and physical activity campaigns; and statewide partnerships with chronic disease coordinators in all 67 counties. The Obesity Prevention Program also collaborates with other chronic disease prevention programs such as Heart Disease and Stroke, Cancer, Diabetes, and Coordinated School Health. To learn more about the Obesity Prevention Program and the Bureau of Chronic Disease Prevention and Health Promotion, please visit <http://www.doh.state.fl.us/Family/chronicdisease/>, e-mail obesity@doh.state.fl.us, or call (850) 245-4330.



The Florida Department of Health, Bureau of WIC and Nutrition Services administers the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in the state of Florida. WIC provides nutritious foods, nutrition education, and referrals to health and other social services to participants at no charge. WIC serves low or moderate income pregnant, postpartum and breastfeeding women, and infants and children under five years of age who are at nutrition risk. In Florida, over 420,000 participants are served by WIC each month. WIC has proven to be effective in preventing nutrition related health problems and improving overall health. WIC is a 100 percent federally funded program. At the federal level, WIC is administered by the Food and Nutrition Service of the U.S. Department of Agriculture. To find the telephone number for WIC in your county, call 1-800-342-3556 or visit www.FloridaWIC.org.



The Florida Department of Health, Child and Adolescent Health Programs enable the Florida Department of Health to collaborate with other departments statewide to promote the health and well-being of Florida's children. The Child and Adolescent Health Unit includes: School Health Services Program, Read for Health, Osteoporosis Program, and Child and Adolescent Health Program. For more information about child and adolescent health, visit: www.doh.state.fl.us/family/childhealth/index.html or call 850-245-4475.



The University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS Extension) is a federal-state-county partnership throughout Florida, dedicated to improving your life by developing and providing knowledge about agriculture, natural resources, and life sciences. UF/IFAS conducts research, teaching, and extension of knowledge in the agricultural sciences. Florida Extension is mandated

to provide educational programs in nutrition, food safety, and health in each of Florida's sixty-seven counties. For more information about Extension education programs in Florida, and to locate your county Extension office, visit the University of Florida IFAS Extension “Solutions for Your Life” website: <http://solutionsforyourlife.org>. This website also provides access to a wealth of free downloadable resources related to Agriculture, Community Development, Environment, Families and Consumers (including Nutrition and Food Safety), Youth Development, and Lawns and Gardens.



The U.S. Food and Drug Administration is responsible for protecting public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, the nation's food supply, cosmetics, and products that emit radiation. The FDA is also responsible for advancing public health by helping to speed innovations that make medicines and foods more effective, safer, and more affordable; and

enabling public access to the accurate, science-based information needed to use medicines and foods to improve health. Learn more by visiting www.fda.gov.



Introduction

The Florida Interagency Food & Nutrition Committee (FIFNC) is excited to share with you this Resource Manual that focuses on the promotion of increased consumption of fruits and vegetables. This nutrition education campaign complements and promotes the Fruits & Veggies—More Matters® public health initiative developed by the Produce for Better Health Foundation (PBH) and the Centers for Disease Control and Prevention (CDC). While research has found that many consumers are aware of the health benefits of fruit and vegetable consumption, a large majority of them do not eat the daily amounts of fruits and vegetables recommended by the *Dietary Guidelines for Americans 2005*.

The Fruits & Veggies—More Matters message is intentionally simple—to increase consumption and eat more fruits and vegetables at every eating occasion. The Fruits & Veggies—More Matters message is contained in interactive, consumer-targeted websites. These websites are designed to give individuals the tools and information they need to help them make better food choices.

The websites to visit are www.fruitsandveggiesmorematters.org which is sponsored by PBH, and www.fruitsandveggiesmatter.gov which is sponsored by CDC. These websites offer recipes, serving ideas, and shopping advice. They include activities and tips for getting children involved and exploring the different varieties of fruits and vegetables that the whole family can eat. Consumers will have the opportunity to share their own easy and fun serving ideas by submitting them online.

Consumers will see the Fruits & Veggies—More Matters brand and logo in stores, online, and on packaging. The Fruits & Veggies—More Matters brand and logo replace the 5 A Day program and logo. This new initiative will leverage the 5 A Day heritage and success to further inspire and support consumers to eat more fruits and vegetables that have an unrivaled combination of great taste, nutrition, abundant variety, and various product forms—fresh, frozen, canned, dried, and 100% juice. It also will build upon the body of science that indicates that increased daily consumption of fruits and vegetables may help prevent many chronic diseases.

FIFNC created this resource manual as one component of the Florida State Nutrition Action Plan (SNAP). SNAP was initiated by the U.S. Department of Agriculture, Food and Nutrition Service (USDA/FNS). The primary purpose of SNAP is to strengthen collaboration on nutrition education and promotion efforts among the USDA/FNS programs within each state. It directs USDA/FNS programs within each state to identify common nutrition goals along with consistent nutrition messages, and to formulate a plan for working together to achieve those goals and promote those messages. For more information, visit the SNAP website at www.fns.usda.gov/oane/SNAP/SNAP.htm.

This resource manual is being provided to public schools; Florida Area Health Education Centers (AHECs); Women, Infants, and Children (WIC) local agencies; County Health Departments; Cooperative Extension offices; child care centers; adult day care centers; school health services programs; Area Agencies on Aging; elder nutrition service provider agencies; and Food Stamp program offices throughout the state.

Lesson plans, activities, and handouts, which can be used with a variety of audiences, are included in this resource manual. These components of the manual can be “mixed and matched” to fit your particular group or class. The materials in this campaign kit may be duplicated for educational purposes only; they may not be duplicated or sold for commercial purposes. If you duplicate these materials, please give the authors the appropriate credit. If you would like more information about this campaign or would like to view all of the materials that are contained in this Resource Manual, visit the FIFNC website at www.FIFNC.com.



Press Release

Press Release: Florida Launches the Fruits & Veggies—More Matters Nutrition Education Campaign

The Florida Interagency Food and Nutrition Committee (FIFNC) is promoting the public health initiative Fruits & Veggies—More Matters® as its 2007 nutrition education campaign. This initiative, which was developed by the Produce for Better Health Foundation (PBH) and Centers for Disease Control and Prevention (CDC), encourages Floridians to increase consumption of fruits and vegetables at every eating occasion. While research has found that many consumers are aware of the health benefits of fruit and vegetable consumption, a large majority of them do not eat the daily amounts of fruits and vegetables recommended by the *Dietary Guidelines for Americans 2005*.

The Fruits & Veggies—More Matters message is intentionally simple—to increase consumption and eat more fruits and vegetables at every eating occasion. The Fruits & Veggies—More Matters message is contained in interactive, consumer-targeted websites. These websites offer recipes, serving ideas, and shopping advice. They include activities and tips for getting children involved and exploring the different varieties of fruits and vegetables that the whole family can eat. Consumers will have the opportunity to share their own easy and fun serving ideas by submitting them online. The websites to visit are: www.fruitsandveggiesmorematters.org which is sponsored by PBH, and www.fruitsandveggiesmatter.gov which is sponsored by CDC.

Consumers will see the Fruits & Veggies—More Matters brand and logo in stores, online, and on packaging. The Fruits & Veggies—More Matters brand and logo replace the 5 A Day program and logo. This initiative will leverage the 5 A Day heritage and success to further inspire and support everyone to eat more fruits and vegetables. Fruits and vegetables have an unrivaled combination of great taste, nutrition, abundant variety, and various product forms—fresh, frozen, canned, dried, and 100% juice. It also will build upon the body of science that indicates that increased daily consumption of fruits and vegetables may help prevent many chronic diseases.

The Florida Interagency Food and Nutrition Committee (FIFNC) includes representatives from the major state agencies in Florida who provide nutrition, food security, and food safety education and services to the public. Agencies who collaborated to sponsor this nutrition education campaign include the: Florida Department of Health; Florida Department of Children and Families; Florida Department of Education; Florida Department of Elder Affairs; Florida Department of Agriculture and Consumer Services; University of Florida Institute of Food and Agricultural Sciences (IFAS) Extension; U.S. Food and Drug Administration, Florida District; and Florida Area Health Education Centers (AHEC) Network. These institutions are equal opportunity providers.



Staff/Instructor Evaluation

Please complete an Evaluation for each lesson plan you used.

Agency/Program Name _____ County _____

Instructor's Name (optional) _____

Please evaluate the usefulness of the Lesson Plan used to make your presentation.

Which lesson plan did you use?

- Preschool
 Elementary
 Teen
 Adult
 Older Adult

Approximate number of participants _____

Lesson plan goals and objectives: Were they appropriate for the target audience?

- Yes
 No

Lesson plan activities: Were they appropriate for this lesson and target audience?

- Yes
 No

Did the audience seem interested in this lesson and its message?

- Yes
 No

As you planned your lesson, how useful were the following materials in the Resource Manual?	Excellent	Very Good	Good	Fair	Poor	Did Not Use
Press Release						
Dietary Guidelines for Americans						
Research Studies						
Important Resources and Websites to Visit						
Worksite Wellness						
Things to Remember When Teaching Young Children						
Lesson Plan						
Lesson Plan Handouts and Activity Sheets						
How useful were these associated materials?						
Campaign's website: www.fifnc.com						
"Eat Your Colors" presentation at www.FIFNC.com						

Identify other materials that would have helped promote this message.

Please list ideas for topics that may be used to promote future campaign messages.

Thanks so much for your feedback!



Dietary Guidelines for Americans

The following is selected text and tables adapted from Chapter 5 of the *Dietary Guidelines for Americans 2005* that discuss fruits and vegetables:

OVERVIEW

Compared with the many people who consume a dietary pattern with only small amounts of fruits and vegetables, those who eat more generous amounts as part of a healthful diet are likely to have reduced risk of chronic diseases, including stroke and perhaps other cardiovascular diseases, type 2 diabetes, and cancers in certain sites (oral cavity and pharynx, larynx, lung, esophagus, stomach, and colon-rectum). Diets rich in foods containing fiber, such as fruits, vegetables, and whole grains, may reduce the risk of coronary heart disease. Diets rich in milk and milk products can reduce the risk of low bone mass throughout the life cycle. The consumption of milk products is especially important for children and adolescents who are building their peak bone mass and developing lifelong habits. Although each of these food groups may have a different relationship with disease outcomes, the adequate consumption of all food groups contributes to overall health.

KEY RECOMMENDATIONS

- Consume a sufficient amount of fruits and vegetables while staying within energy needs. Two cups of fruit and 2½ cups of vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on the calorie level.
- Choose a variety of fruits and vegetables each day. In particular, select from all five vegetable subgroups (dark green, orange, legumes, starchy vegetables, and other vegetables) several times a week.

DISCUSSION

Fruits, vegetables, whole grains, and milk products are all important to a healthful diet and can be good sources of the nutrients of concern (see Chapter 2 of the *Dietary Guidelines for Americans 2005*). When increasing intake of fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products, it is important to decrease one's intake of less-nutrient-dense foods to control calorie intake. The 2,000-calorie level used in the discussion is a reference level only; it is not a recommended calorie intake because many Americans should be consuming fewer calories to maintain a healthy weight.

Fruits and Vegetables

Four and one-half cups of fruits and vegetables are recommended daily for the reference 2,000-calorie level, with higher or lower amounts depending on the caloric level. This results in a range of 2½ to 6½ cups of fruits and vegetables each day for the 1,200- to 3,200-calorie levels (Appendix A-2. USDA Food Guide). Fruits and vegetables provide a variety of micronutrients and fiber. Table 5 provides a list of fruits and vegetables that are good sources of vitamins A (as carotenoids) and C, folate, and potassium. In the fruit group, consumption of whole fruits (fresh, frozen, canned, dried) rather than fruit juice for the majority of the total daily amount is suggested to ensure adequate fiber intake. Different vegetables are rich in different nutrients. In the vegetable group, weekly intake of specific amounts from each of five vegetable subgroups (dark green, orange, legumes [dry beans], starchy, and other vegetables) is recommended for adequate nutrient intake. Each subgroup provides a somewhat different array of nutrients. In the USDA Food Guide (now referred to as MyPyramid) at the reference 2,000-calorie level, the following weekly amounts are recommended:

Dietary Guidelines for Americans (continued)

Dark green vegetables	3 cups per week
Orange vegetables	2 cups per week
Legumes (dry beans)	3 cups per week
Starchy vegetables	3 cups per week
Other vegetables	6½ cups per week

Most current consumption patterns do not achieve the recommended intakes of many of these vegetables. The DASH Eating Plan and the USDA Food Guide (now referred to as MyPyramid) suggest increasing intakes of dark green vegetables, orange vegetables, and legumes (dry beans) as part of the overall recommendation to have an adequate intake of fruits and vegetables (see Chapter 2 of the *Dietary Guidelines for Americans 2005*).

TABLE 5. Fruits, Vegetables, and Legumes (Dry Beans) That Contain Vitamin A (Carotenoids), Vitamin C, Folate, and Potassium

Many of the fruits, vegetables, and legumes (beans) are considered to be important sources of vitamin A (as carotenoids), vitamin C, and potassium in the adult population. Intakes of these nutrients, based on dietary intake data or evidence of public health problems, may be of concern. Also listed are sources of naturally occurring folate, a nutrient considered to be of concern for women of childbearing age and those in the first trimester of pregnancy. Folic acid-fortified grain products, not listed in this table, are also good sources.

Sources of vitamin A (carotenoids)

- Bright orange vegetables like carrots, sweet potatoes, and pumpkin
- Tomatoes and tomato products, red sweet pepper
- Leafy greens such as spinach, collards, turnip greens, kale, beet and mustard greens, green leaf lettuce, and romaine
- Orange fruits like mango, cantaloupe, apricots, and red or pink grapefruit

Sources of vitamin C

- Citrus fruits and juices, kiwi fruit, strawberries, guava, papaya, and cantaloupe
- Broccoli, peppers, tomatoes, cabbage (especially Chinese cabbage), brussels sprouts, and potatoes
- Leafy greens such as romaine, turnip greens, and spinach

Sources of folate

- Cooked dry beans and peas
- Oranges and orange juice
- Deep green leaves like spinach and mustard greens

Sources of potassium

- Baked white or sweet potatoes, cooked greens (such as spinach), winter (orange) squash
- Bananas, plantains, many dried fruits, oranges and orange juice, cantaloupe, and honeydew melons
- Cooked dry beans
- Soybeans (green and mature)
- Tomato products (sauce, paste, puree)
- Beet greens



Dietary Guidelines for Americans (continued)

The table shown below was adapted from Appendix A-2. USDA Food Guide (page 53) of *Dietary Guidelines for Americans 2005*. This table shows suggested amounts of food to consume from the fruits food group and vegetables food group and vegetables subgroup to meet recommended nutrient intakes at 12 different calorie levels.

Note: Food group amounts shown in number of cups (c). The following each count as 1 cup of fruits or vegetables: 1 cup cut-up raw or cooked fruit or vegetable, 1 cup fruit or vegetable juice, 2 cups leafy salad greens, ½ cup dried fruit. Explanation of vegetable subgroup amounts: Vegetable subgroup amounts shown in this table as weekly amounts, because it would be difficult for consumers to select foods from each subgroup daily. A daily amount that is one-seventh of the weekly amount listed is used in calculations of nutrient and energy level patterns.

Calorie Level	1,000	1,200	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200
Fruits	1 c	1 c	1.5 c	1.5 c	1.5 c	2 c	2 c	2 c	2 c	2.5 c	2.5 c	2.5 c
Vegetables	1 c	1.5 c	1.5 c	2 c	2.5 c	2.5 c	3 c	3 c	3.5 c	3.5 c	4 c	4 c
Dark green vegetables	1 c per week	1.5 c per week	1.5 c per week	2 c per week	3 c per week	3 c per week	3 c per week	3 c per week	3 c per week	3 c per week	3 c per week	3 c per week
Orange vegetables	0.5 c per week	1 c per week	1 c per week	1.5 c per week	2 c per week	2 c per week	2 c per week	2 c per week	2.5 c per week			
Legumes	0.5 c per week	1 c per week	1 c per week	2.5 c per week	3 c per week	3 c per week	3 c per week	3 c per week	3.5 c per week			
Starchy vegetables	1.5 c per week	2.5 c per week	2.5 c per week	2.5 c per week	3 c per week	3 c per week	6 c per week	6 c per week	7 c per week	7 c per week	9 c per week	9 c per week
Other vegetables	4 c per week	4.5 c per week	4.5 c per week	5.5 c per week	6.5 c per week	6.5 c per week	7 c per week	7 c per week	8.5 c per week	8.5 c per week	10 c per week	10 c per week



Can eating fruits and vegetables help people to manage their weight?

Here is a summary of “Can eating fruits and vegetables help people to manage their weight?” from the National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity, Research to Practice Series, No. 1. To read the entire research review you can visit www.cdc.gov/nccdphp/dnpa/nutrition/pdf/rtp_practitioner_10_07.pdf.

Summary

Consuming a diet high in fruits and vegetables is associated with lower risks for numerous chronic diseases, including cancer and cardiovascular disease. Even so, the impact of eating fruits and vegetables on weight management has not been widely researched. This brief examines the evidence from available studies to determine whether eating fruits and vegetables can help with weight management. Only the outcomes of these studies are provided, but you are encouraged to read the articles themselves to gain many more insights into the health aspects of eating fruits and vegetables.

The research that is covered in this brief supports the conclusion that replacing foods of high energy density (high calories per weight of food) with foods of lower energy density, such as fruits and vegetables, can be an important part of a weight management strategy.

Extensive research has been conducted on the relationships between calories, amount of food eaten and body weight. The association of this information with the role of fruits and vegetables in weight management can be summarized as follows:

- To lose weight a person must eat fewer calories than what he or she expends.
- People may not limit what they consume based on calories alone. Feeling full is one reason that people stop eating. Short-term studies indicate that the volume of food people eat at a meal is what makes them feel full and stop eating, rather than the calorie content of the food.
- At the same calorie level, foods with low energy density provide a greater volume of food, which may help people feel full at a meal while consuming fewer calories.
- Water and fiber increase the volume of foods and reduce energy density. In their natural state, fruits and vegetables have high water and fiber content and thus are low in calories and energy density.
- Fruits and vegetables are good substitutes for foods of high energy density.

Research Studies (continued)

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Important Resources and Websites to Visit

Produce for Better Health Foundation (PBH)

The Produce for Better Health Foundation (PBH) is a non-profit 501(c)(3) consumer education foundation whose purpose is to motivate people to eat more fruits and vegetables to improve public health. The foundation is responsible for a variety of nutrition education and marketing programs, including the new Fruits & Veggies—More Matters® health initiative. PBH also achieves success through nutrition policy efforts and industry and government collaboration. For more information about PBH or to see how you can support the effort to increase fruit and vegetable consumption for better health, visit www.pbhfoundation.org. The PBH website for the Fruits & Veggies—More Matters health initiative is www.fruitsandveggiesmorematters.org.

Centers for Disease Control and Prevention (CDC)

The CDC is one of the major operating components of the U.S. Department of Health and Human Services and is the nation's top source of health information. It is the lead government agency and primary health authority behind the Fruits & Veggies—More Matters health initiative. The CDC website for the Fruits & Veggies—More Matters health initiative is www.fruitsandveggiesmatter.gov. To locate partner websites, go to http://www.fruitsandveggiesmatter.gov/partner_websites/index.html.

There is a recent research study on the topic of fruit and vegetable consumption among adults in the United States published by CDC. It can be found at: *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, March 16, 2007/56(10);213-217. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5610a2.htm>.

Dietary Guidelines for Americans 2005

Looking for sound, science-based advice on weight control, getting stronger muscles and bones, and balanced nutrition? Then visit www.healthierus.gov where you'll also find the *Dietary Guidelines for Americans 2005*.

MyPyramid Food Guidance System

MyPyramid and the MyPyramid for Kids are the visual representations of the U.S. Department of Agriculture's food guidance system. The MyPyramid Plan allows people to personalize and tailor the recommendations based on lifestyle. MyPyramid for Kids adds a kid-friendly spin, to make learning about healthy habits fun. For more information, visit www.mypyramid.gov. This website is also available in the Spanish language at <http://www.mypyramid.gov/sp-index.html>.

Pennsylvania Nutrition Education Network, State Nutrition Action Plan (SNAP)

Pennsylvania SNAP agencies have developed a coordinated vegetable campaign with particular emphasis on locally grown produce. Each vegetable features materials that cover nutrition and health benefits, growing, market selection, preparation, and educational activities. These free materials include newsletter inserts, bookmarks, flyers, table tents, recipes, shopping guide, recipes, and more. The various materials are provided in easy-to-download PDF files, which can be used alone or combined with other educational materials. Please feel free to cut and paste from any of the materials as well. To access these materials, visit <http://panen.psu.edu/snap/index.html>.



Worksite Wellness

by Gladys Borges, MS, LD/N
Florida Department of Health

Promoting Fruits & Veggies—More Matters at the Worksite!

Goal

To encourage adults to eat more fruit and vegetables at their worksites, because more matters!

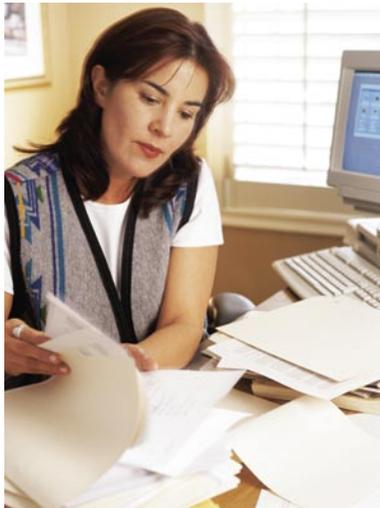
Objectives

Adults who follow these recommendations will learn:

- that all forms of fruits and vegetables matter—fresh, frozen, canned, dried, and 100% juice.
- that a variety of colors matters—red, dark green, yellow, blue, purple, white, and orange provide a range of nutrients.
- to offer healthier snack items for meetings or trainings.
- about the many benefits of consuming fruits and vegetables including helping in weight loss or weight maintenance.
- how to include fruits and vegetables instead of high fat and sweetened snack options.

Introduction

The Fruits & Veggies—More Matters® nutrition education campaign provides practical tips on how to include more fruits and vegetables in your meals and snacks. There is a large gap between how many fruits and vegetables people know they should eat and how many they actually eat. To meet the *Dietary Guidelines for Americans 2005*, most consumers need to increase their consumption of fruits and vegetables dramatically. The Fruits & Veggies—More Matters campaign promotes a simple message which is to eat more fruits and vegetables.



Information You Can Share With Your Employer

According to the *Dietary Guidelines for Americans 2005*, people who eat generous amounts of fruits and vegetables as part of a healthful diet are likely to have reduced risk of chronic diseases, cardiovascular diseases, including stroke, type 2 diabetes, and certain types of cancer. Also, as part of a healthy diet, eating fruits and vegetables instead of high fat foods may actually make it easier to control weight. Individuals who consume more fruits and vegetables may feel full on fewer calories because fruits and vegetables are lower in calories and higher in fiber and water than other foods.

There is a large gap between how many fruits and vegetables people know they should eat and how many they actually eat. According to the 2005 Behavioral Risk Factor Surveillance System, only 26.2 percent of Florida adults ate the recommended five servings of fruits and vegetables per day.

The Produce for Better Health Foundation's National Action Plan promotes health through increased fruit and vegetable consumption. This plan outlines many opportunities for employers to create worksite environments that provide occasions to increase employee motivation, opportunity, and ability to choose fruits and vegetables. Providing access to healthy eating at work is an excellent investment. Over time, it can save costs from diet-related diseases and lost productivity, while increasing employee health and morale.

Activities

- Visit the Fruits & Veggies—More Matters website at www.fruitsandveggiesmorematters.org and download fruit and vegetable flyers and fact sheets to post in your cafeteria and break rooms.

Worksite Wellness (continued)

- Ask your human resources representative to contact your County Health Department, local Dietetic Association, or local Cooperative Extension Office to schedule a healthy snacks workshop for employees.
- Meet and work with your human resources representative to assess whether a farmer’s market can provide local produce for employees.
- Coordinate activities to promote a fruit and vegetable of the month. Contact your local Cooperative Extension office for ideas and/or resources.
- Coordinate a contest or challenge between coworkers or department employees. Visit www.takeactionca.com/ for ideas.
- Test your fruit and vegetable I.Q. with a true or false quiz. A copy of the quiz is located in the “Consumer Handouts developed by CDC” section of this manual.
- Include motivating messages and interesting tips at your meetings or events, for example:
 - ♦ Fruits & veggies taste great!
 - ♦ Fruits & veggies are the original fast food—they are easy to fix and serve.
 - ♦ Fruits & veggies help you feel more energetic and are good for your health.

Worksite Wellness Resources

American Cancer Society’s Workplace Solutions, Building a Healthy Workforce, Meeting Well. This is a tool designed to help your organization plan meetings and events with good health in mind. The website to visit is: www.acsworkplacesolutions.com/meetingwell.asp.

California Department of Health Services, California Fit Business Kit. The website to visit is: www.dhs.ca.gov/ps/cdic/cpns/worksite/FitBusinessKit.htm.

The Kit includes:

- Check for Health Assessment Tool
- Healthy Meeting Policies
- Vending Machine Food and Beverage Standards
- Healthy Dining Menu Guidelines
- Simple Steps to Ordering Farm Fresh Produce for the Worksite
- A Guide to Establishing a Worksite Farmers’ Market
- Healthy Stairwells Tool
- A Guide to Creating Worksite Walking Clubs
- Take Action! Employee Wellness Program

Centers for Disease Control and Prevention’s Healthier Worksite Initiative. This initiative was designed for planners of workforce health promotion programs at federal and state agencies. The website to visit is: www.cdc.gov/hwi. CDC also has information on how to establish a fresh garden market in a federal agency or other organization. The website to visit is: www.cdc.gov/nccdphp/dnpa/gardenmarket/index.htm.

Partnership for Prevention’s Healthy Workforce 2010: An Essential Health Promotion Sourcebook for Employers, Large and Small. To access this file, go to: http://prevent.org/images/stories/Files/publications/Healthy_Workforce_2010.pdf.

U.S. Department of Agriculture, Food and Nutrition Service “Take Action” Series. This program encourages participants and staff to take actions to improve their health by making positive changes to key dietary and related behaviors. Increasing intake of fruits and vegetables is highlighted. The website to visit is: www.fns.usda.gov/oane/SNAP/TakeAction/TakeAction.htm.



Things to Remember When Teaching Young Children

by Brenda J. Crosby, RD, LD
Bureau of Child Nutrition Programs
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Note: Review this information before reading and/or using the Preschool and Elementary Lesson Plans.

Below are tips and ideas to remember when teaching young children in the classroom or at home.

Children's Age, Ability, and Behavior

1. The teacher should keep in mind that age does not necessarily reflect the child's learning ability.
2. Therefore, the teacher should use his/her better judgment to decide whether it is appropriate to divide children by their age or according to their level of development.
 - Some four year olds may be more comfortable working with the three year olds and those more developed may be more suited to work with the five year olds.
 - ♦ If the activities with the three year olds are too easy for them, they could lose their attention because they are not challenged enough to learn. If that is the case, these children should work with the older age group.
 - ♦ If the more advanced lessons are too challenging for some of the older children, their attention can also stray. Have these children try working with the younger group for that particular lesson.
3. Make the transition from one group to the next, easy and unpronounced.
 - Tell the children they are switching groups because the teacher thought they would enjoy the other activities better.
 - Parents have more concern for such transitions than the children, so it is important for the teacher to put them at ease.
4. All adults who work and take care of children should note two important facts about their behavior.
 - Children who have a tendency to make more noise in the classroom often get more notice from the teachers. Teachers should try to make sure that the quieter children who sit or play alone get the important attention that all children deserve.
 - The boys in the classroom have a tendency to get more attention than the girls in the classroom, especially when the teacher is female.
 - ♦ Teachers might want to notice if they have the tendency to give more attention to one group of children than the others and then work toward being more even-handed when interacting with children.
 - ♦ It is generally acknowledged that boys learn through competitive activities, while girls learn better through cooperative activities.
 - ♦ Working with young children provides an opportunity to introduce these two types of activities to both sexes so they can learn from both styles.
 - ♦ On average, learning activities are more competitive oriented so girls might not perform as well or with as much confidence as boys.
 - ♦ It is a good challenge for teachers and parents to monitor such biases and eliminate them as much as possible.



Things to Remember When Teaching Young Children (continued)

You are the ROLE MODEL

1. Ask yourself, “What are my eating habits?” and “What is it that I do for physical activity?” As adults, we need to make sure we are practicing the same habits we ask the children around us to practice.
2. Children copy the way their parents and teachers act, think, and talk.
 - Children are much less likely to smoke, for example, if their parents do not smoke.
 - Adults can easily forget how their actions affect children.
 - Adults can easily misjudge the amount of information children retain at young ages.
3. As parents and teachers, we need to remember to “practice what we preach” by being good examples for children.

Children Love to REPEAT Things

Repeating new words and ideas is one of the best ways children from birth to six years old remember and learn.

1. Repetition helps them learn how to pronounce words correctly. This is why children like to read the same book over and over again even if it is boring for adults!
2. Repetition should be incorporated throughout a lesson plan for young children.

Emphasize POSITIVE WAYS of Talking and Acting

1. Parents and teachers should try to tell children what they want them to do rather than what they don’t want them to do.
 - When a child is talking too loudly, the teacher can say, “Please talk quietly,” rather than, “Do not talk so loud.” From “Do not talk so loud,” children mainly hear the word, “loud.” From “Please talk quietly,” children mainly hear the word, “quietly.”
 - Very young children rarely pay attention to words like, “not” or “but.”
2. Teaching children positive ways of eating and moving is also a better approach than focusing on the negative. EXAMPLE: We don’t want them to think it is wrong to eat a piece of cake or a cookie once in a while or to be still (not active) at different times during the day.

Listening, Seeing, and Doing Things

1. Increase children’s chances of learning by having them listen to the teacher while the teacher shows them pictures of the subject being taught.
 - This is the same thing as children doing “show and tell” at school.
 - Children remember better what they are taught when we show and tell them what they are learning. EXAMPLE: Say the new word and spell it aloud and write the word on the board for the children to see what it looks like. Show photos or drawings of fruit while describing each fruit and what it tastes like.
2. Expand the “show and tell” idea by having the children take part in activities related to the new subject being taught. EXAMPLE: Talk about an apple, show the children what an apple looks like, and provide apples for the children to taste. Have the children draw or color a picture of an apple.

Teaching Children New Things with What They Already Know

Easier and possibly faster ways to have children learn is by introducing new ideas with those they already know.

EXAMPLE: Fruit, a new subject for young children, can be taught through “food,” a word and idea they already know. Ask children about their favorite foods and tell them that a specific group of food is fruit. Once children are familiar with the idea of fruit, specific kinds of fruit, such as apples or oranges, can be introduced to them.

Things to Remember When Teaching Young Children (continued)

Gradually Introducing New Words and Concepts

1. When teaching children new words and concepts, choose words that are within the children's level of understanding. Words that are too difficult to understand can frustrate children and make them feel disappointed in themselves. EXAMPLE: "Kiwi" may be a new and difficult word for children to understand.
2. New words need to be slowly introduced to children through repetition, listening, seeing, and doing. Words taught too quickly makes learning more difficult, which can cause frustration and disappointment.

Self-Esteem and Pride

1. An important way to help children build self-esteem is by encouraging them to be proud of themselves and what they do. Young children build personal pride when parents and teachers encourage them to congratulate themselves by clapping their hands or hugging themselves.
2. By repeating activities a few times a week, children are more likely to successfully learn and remember long term. Through their successes, they develop their self-esteem.

Reminder for All Adults

1. For many young children, the concepts included in a lesson plan are being explained to them for the first time.
2. Children at young ages might have a harder time grasping some of the concepts compared to the older children being taught similar principles.
3. Adults teaching these concepts to the younger aged children should give themselves credit for taking on such educational challenges. Adults are laying the foundation for these concepts so the children will be more likely to maintain these principles as they grow older.
4. The dialogue written in a lesson plan should help the teachers communicate concepts and principles to the children. However, the teachers have the flexibility, if they wish, to change the dialogue as they see fit.



Resources

- South Dakota Public Broadcasting. (1999). How Children Learn. Retrieved December 22, 2003 from: http://www.sdpb.org/www/learning/RTL/ready_how.htm
- Kaufman N, Castrucci B, Mowery P. (2002 June). Predictors of change on the smoking uptake continuum among adolescents. *Archives of Pediatrics and Adolescent Medicine* (156).
- Lamanna M, Riedmann A. (2003). *Marriages and Families: Making Choices in a Diverse Society* (8th ed) Thomson Learning Inc.: Belmont, CA.



Preschool Lesson

by Tera A. Kraus, CHES and Gladys Borges, MS, LD/N
Bureau of Child Nutrition Programs
Florida Department of Health

Topic: It's Fun to Eat Fruits and Vegetables

Concept

Promote the importance of and encourage eating five or more servings of fruits and vegetables every day.

Goals

1. Children will become familiar with a variety of fruits and vegetables and the importance of eating them.
2. Children will be made aware of where to find fruits and vegetables (grocery, fruit and vegetable stand, farmers market, and garden).
3. Children will be made aware of the importance of eating fruits and vegetables each day.

Objectives and Activities for Children 3 to 4½ Years Old

Objectives

1. Children state different locations where produce can be purchased.
2. Children recognize the two sections of MyPyramid which represent fruits and vegetables.
3. Children recall the importance of eating fruits and vegetables.



Materials Needed

- MyPyramid Poster—Ordering information is available from: www.mypyramid.gov (An 8½" X 11" size poster of this is available on page 47 of this Resource Manual.)
- *Having Fun at Your Local Farmers Market* Coloring Book, US Department of Agriculture, copyright 2005–1 per child and teacher. To view and download the coloring book, go to this website: <http://www.ams.usda.gov/farmersmarkets/KidsCorner.htm>
- Give Me 5 A Day! music CD: Ordering information is available from this website: www.floridawic.org/Documents/Five_A_Day/Give_me_5_a_day_CD.html
- Index cards with various pictures of fruits and vegetables glued on them with name written underneath picture. (Pictures of fruits and vegetables are available on page 49 of this Resource Manual.)
- Shoebox decorated with green construction paper or green spray paint—1 per child.
- Craft sticks—several per child.
- Glue.
- Pictures of various fruits and vegetables to be glued on craft sticks—several per child. (Pictures of fruits and vegetables are available beginning on page 49 of this Resource Manual.)

Activities

1. Have the children sit in a circle on the floor. The teacher says, "Today we will be learning about fruits and vegetables." The teacher points to the green stripe of the MyPyramid and says, "The green stripe of MyPyramid represents the vegetable group." The teacher points to the red stripe of MyPyramid and says "Can anyone guess what the red stripe of MyPyramid represents?" The teacher gives each child a chance to answer. Continue by saying, "That's right, it is the fruit part of MyPyramid. It's red like an apple!"

Preschool Lesson (continued)

- The teacher asks, "Where do you get fruits and vegetables from? Does your mom or dad buy them at the grocery store?" Give each child a chance to answer. Continue by saying, "There are a lot of places to get healthy fruits and vegetables. Have you ever picked an orange off of a tree or picked strawberries off of vines on the ground?" After giving each child a chance to answer, say, "There are a lot of places to get fruits and vegetables. We can buy them at the grocery store, at a vegetable or fruit stand (also called a produce stand), from a garden, or at a farmers market. Has anybody ever gone to a farmers market?" Read *Farmers Market Coloring Book*. Allow the children to take their books home to color or color at another time.
- The Garden Game:** The teacher says, "Fruits and vegetables give us energy to help us grow strong and they are full of important vitamins and minerals. They also keep you healthy so you can play games. Let's play the Garden Game!" Have all of the children sit in a circle while playing the "Give Me 5 A Day!" music CD. Give each child a card with a picture of a vegetable or fruit and its name written below the picture. When everybody is seated, say "Everybody look at the fruit or vegetable card I gave you. Does everybody know what vegetable or fruit you have? Raise your hand if you need help." After all the children know what they have, the teacher explains the game by saying, "I'm going to say the name of two fruits or vegetables. If I say the name of the fruit or vegetable that is on your card, then you trade places as quickly as you can! Are you ready?" The teacher starts the game by saying, "Apple and Cucumber trade places." If the children seem confused, explain that the two children need to trade seats. Continue naming fruits and vegetables listed on the cards until all of the children have traded places. Once all children have moved, the teacher enthusiastically says, "Let's make a tossed salad!" The teacher instructs all of the children to stand up and switch places with any other "fruit or vegetable."
- The teacher says, "Let's play the 'Give Me 5 A Day!' music CD again! This time let's move our bodies the way the singer tells us to." All the children should stand in the open floor with the teacher and follow the instructions on how to dance to each song. The teacher can choose to play only one song or the entire CD. The teacher should allow the children to dance freely as a form of expression as well.
- The Shoebox Garden:** The teacher gives each child a decorated (with spray paint or paper) shoe box with small slits in the top for a craft stick to fit into the slit. In the center of the table, place craft sticks with pictures of fruits and vegetables glued to the top portion of the craft stick. The teacher says, "Each of you pick a few of the pictures with your favorite fruits or vegetables." Push the craft sticks through the slits in the box for the children to make a "garden." After the gardens are assembled, go over the fruits and vegetables that each child has chosen. Instruct the children to look for these different fruits and vegetables the next time they are at the grocery store or farmers market.

Objectives and Activities for Children 4½ to 5 Years Old

Objectives

- Children discuss different locations where produce can be purchased.
- Children identify the two sections of MyPyramid which represent fruits and vegetables.
- Children explain the importance of eating fruits and vegetables.

Materials needed

- All of the materials listed on page 23 that under Objectives and Activities for Children 3 to 4½ Years Old.
- Clear plastic gloves—1 for each group or each student.
- Cotton balls—5 for each glove.
- Water.
- Pencil.
- Various types of vegetable seeds.
- One sweet potato.
- 4 to 8 toothpicks.
- Glass or clear container.
- Broccoli crown—The pattern is on page 52 of this Resource Manual.
- Green shirt.

Preschool Lesson (continued)

Activities

1. Have the children sit in a circle on the floor. The teacher says, "Today we will be learning about fruits and vegetables." The teacher points to the green stripe of the MyPyramid and says, "The green stripe of MyPyramid represents the vegetable group." The teacher points to the red stripe of MyPyramid and says "Can anyone guess what the red stripe of MyPyramid represents?" The teacher gives each child a chance to answer. Continue by saying, "That's right, it is the fruit part of MyPyramid. It's red like an apple".
2. The teacher says, "There are a lot of places to get healthy fruits and vegetables. Have you ever picked an orange off a tree or picked strawberries off vines on the ground?" After giving each child a chance to answer, say "There are a lot of places to get fruits and vegetables. We can buy them at the grocery store, at a vegetable or fruit stand (also called a produce stand), from a garden or at a farmers market. Has anybody ever gone to a farmers market?" Read the Farmers Market Coloring Book. Allow the children to take their books home to color or color at another time.
3. The teacher says, "Fruits and vegetables are full of important vitamins and minerals and have energy to help you grow strong. They also keep you healthy so you can play games. Let's play the Garden Game!" Have all of the children sit in a circle and play the "Give Me 5 A Day!" music CD. Give each child the name of a vegetable or fruit. When everybody is seated, say "Everybody look at the fruit and vegetable name I gave you. Does everybody know what fruit or vegetable you have? Raise your hand if you need help." After all of the children know what they have, the teacher explains the game by saying, "I'm going to say the name of two fruits or vegetables. If I say the name of the fruit or vegetable that is on your card, then you trade places as quickly as you can! Are you ready?" The teacher starts the game by saying, "Apple and Cucumber trade places." If the children seem confused, explain that the two children need to trade seats. Continue naming fruits and vegetables listed on the cards until all of the children have traded places. Once all children have moved, the teacher enthusiastically says, "Let's make a tossed salad!" The teacher instructs all of the children to stand up and switch places with any other "fruit or vegetable."
4. The teacher says, "Let's play the 'Give Me 5 A Day!' music CD again! This time let's move our bodies the way the singer tells us to." All the children should stand in the open floor with the teacher and follow the instructions on how to dance to each song. The teacher can choose to play only one song or the entire CD. The teacher should allow the children to dance freely as a form of expression as well.
5. **The Shoebox Garden:** The teacher gives each child a decorated (with paper or spray paint) shoe box with small slits in the top for a craft stick to fit into the slit. In the center of the table, place pictures of a variety of fruits and vegetables. Give each child glue and craft sticks and allow them to choose pictures they like and glue them on the sticks. Push the craft sticks through the slits in the box to make a "garden." After the gardens are assembled, go over the fruits and vegetables that each child has chosen. Instruct the children to look for these different fruits and vegetables the next time they are at the grocery store or farmers market.
6. **Garden in a Glove:** Give each student a clear plastic glove (found at grocery stores) with her name on it and 5 cotton balls. Have the children wet the cotton balls and squeeze out the excess water. Place one dampened cotton ball in each finger. You may need to use the tip of a pencil to push the cotton ball to the very tip. Give each child several (3-5) of the same seed type for each finger (a total of 15-25 seeds). Radish, beans, peas, lettuce, and tomatoes are good choices. Each finger should have the same seed type. Write on each finger what type of seed is planted in it. Tape the gloves to wall, chalkboard or window. Seeds will germinate in 3 to 5 days. Transplant after 1½ to 2 weeks. To do this, cut the bottom of glove's fingers and transplant cotton ball and plants in small pots full of soil. Observe the plants and discuss every couple of weeks.
7. **Grow a sweet potato!** Take a sweet potato and stick tooth picks around the center of the potato. Put the potato in a glass so that the toothpicks keep the potato from sliding all the way down the glass. Fill the glass with water so that the bottom half of the potato is in the water. Put the glass and potato in a dark room or closet until it begins to sprout. Make sure the bottom half of the potato remains submerged in the water. After the potato begins to sprout, move it to a sunny place. If you continue watering it, you'll have a sweet potato vine!
8. **Read the Interview with Mr./Ms. Broccoli.** (The script is provided on page 48 of this Resource Manual.) This demonstration will need two adults. Have Mr./Ms. Broccoli wear the broccoli crown and possibly a green shirt. (The pattern for the crown is provided on page 52 of this Resource Manual.)

Preschool Lesson (continued)

References

Fruits & Veggies—More Matters® websites:

www.fruitsandveggiesmorematters.org

www.fruitsandveggiesmatter.gov

Mealtime Memo for Child Care, National Food Service Management Institute website: www.nfsmi.org

MyPyramid website: www.mypyramid.gov

Nibbles for Health, USDA TEAM Nutrition website: www.fns.usda.gov/tn

Nutrition Education Activities for Young Children, Bureau of Child Nutrition Programs, Florida Department of Health at: www.doh.state.fl.us/ccfp

Sunshine State Standards

3-4 YEAR OLDS

Health Education HE.A.1.1.2
 Health Education HE.A.1.1.9
 Language Arts LA.C.1.1.1
 Language Arts LA.C.3.1.1
 Physical Education PE.B.2.1.2
 Physical Education PE.A.1.1.3
 Dance DA.A.1.1.2
 Dance DA.A.1.1.4
 Visual Arts VA.A.1.1

4-5 YEAR OLDS

Health Education HE.A.1.1.2
 Health Education HE.A.1.1.9
 Language Arts LA.C.1.1.1
 Language Arts LA.C.3.1.1
 Physical Education PE.B.2.1.2
 Physical Education PE.A.1.1.3
 Dance DA.A.1.1.2
 Dance DA.A.1.1.4
 Visual Arts VA.A.1.1
 Science SC.F.1.1.3
 Science SC.G.2.1.1
 Theatre TH.D.1.1.3

Agency for Workforce Innovation, Office of Early Learning Performance Standards for 3, 4, and 5 year olds

	3 YEAR OLDS	4 YEAR OLDS	5 YEAR OLDS
Physical Health			
B. Knowledge of Wellness	2: H.S.8	2: H.S.8	2: *8
Social & Emotional			
C. Interaction with others	1, 2, 3: H.S.11	1, 2, 3: H.S.11	1: *6, 2: *5, 3: *3
Language & Communication			
A. Listening	1: H.S.11	1: H.S.11	1: *15
B. Speaking	1: H.S.12	1: H.S.12	1: *10
C. Literature and Reading	1: H.S.13		
Cognitive Development & General Knowledge			
<i>Scientific Thinking</i>			
A. Inquiry			1: *13
B. Physical Science			1: *11
C. Life Science			1: *13
The Arts			
A. Expression and Representation	1, 2: H.S.13	1, 2: H.S.13	1, 2: *16
Motor Development			
A. Gross Motor Development	1: H.S.14	1: H.S.14	1: *2, *4
B. Fine Motor Development			1, 2: *2, *4



Elementary Lesson

by Christine Brennan, MPA (Grades K-2 section) and
Glenda L. Warren, MS, RD, CFCS (Grades 3-5 section)
University of Florida IFAS Extension

Note: The Fruits & Veggies—More Matters® Coloring Pages, Activity Sheets, and Supermarket Scavenger Hunt Game can be downloaded at www.fruitsandveggiesmorematters.org and then select “Get Kids Involved” and then select topic on left side of screen.

Grades K-2

Goals

1. To teach children about the importance of eating a variety of colorful fruits and vegetables.
2. To encourage children to eat more fruits and vegetables.

Objectives

1. Students will be able to identify foods in the fruit group and the vegetable group.
2. Students will develop knowledge about the importance of eating a variety of colorful fruits and vegetables in a healthy diet.

Activity 1: Introduction to fruits and vegetables

Materials needed

- Fruits & Veggies—More Matters Coloring Pages #1-5 (These are available beginning on page 58 of this Resource Manual.)
- Photographs of various fruits and vegetables.



Discussion

1. Display the photos of fruits and vegetables. Ask a variety of questions such as:
“Who likes fruits and vegetables?”
“How many did you eat yesterday?”
“Who knows what this is?”
“Is it a fruit, or a vegetable?”
“How many of you have eaten this fruit/vegetable?”
“Let’s color the fruits and vegetables on the coloring pages.”

Use the coloring pages to color the fruits and vegetables the correct colors.

2. Fruits and vegetables are foods that grow on plants, trees, or in the ground. Fruits and vegetables are good for you because they are good sources of vitamins and minerals. Vitamins and minerals help you to stay healthy. We should try to eat more colorful fruits and vegetables every day.

Elementary Lesson (continued)

Grades K-2 (continued)

Activity 2: What kind of fruits and vegetables do you eat?

Materials needed

- Fruit & Veggies—More Matters Tracker & Shopping Planner Activity Sheet #1, Fruit & Veggie Eater Meter! (This activity sheet is available on page 63 of this Resource Manual.)

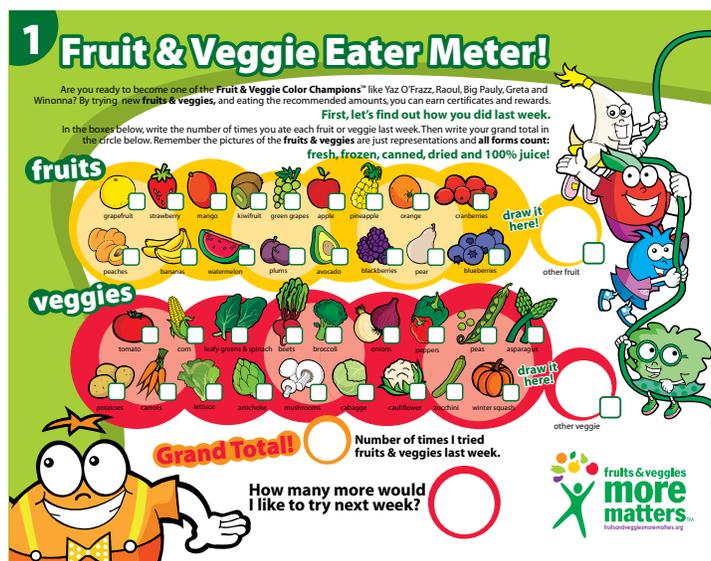
Discussion

1. Use the “Fruit & Veggie Eater Meter!” Activity Sheet #1 to talk about the different fruits and vegetables.
2. It is important to eat a variety of fruits and vegetables because different fruits and vegetables provide different vitamins and minerals.

Citrus fruits, like oranges, provide vitamin C, which helps to heal cuts and keep us from getting colds.

Orange, yellow and dark green leafy vegetables provide vitamin A, which helps with our vision and helps to keep us healthy.

There are many different fruits and vegetables that are an important part of a healthy diet.



Activity 3: How Much is a Cup?

Materials needed

- Fruits & Veggies—More Matters “How Much is a Cup?” Activity Sheets #1-4. (These activity sheets are available beginning on page 54 of this Resource Manual.)

Discussion

1. How many fruits and vegetables do you need to eat each day? Children your age should have at least 1½ cups of fruit and 1½ to 2 cups of vegetables every day! We should choose a variety of fruits and vegetables in many different colors for good health.
2. Ask children to look at each of the “How Much is a Cup?” Activity Sheets. Talk about how much a cup is, the variety of colors of fruits and vegetables, and the different forms of fruits and vegetables.

Elementary Lesson (continued)

Grades K-2 (continued)

Activity 4: Weekly Shopping Planner Activity

Materials needed

- Fruits & Veggies—More Matters Tracker & Shopping Planner Activity Sheet #3, Weekly Shopping Planner! (This Activity Sheet is available on page 65 of this Resource Manual.)

Discussion

Use the “Weekly Shopping Planner!” Activity Sheet #3 during the discussion. Ask students the following questions:

1. Which fruits and veggies are your favorites?
2. Did you know you can have them frozen, canned, dried, and as 100% juice as well as fresh?
3. Help your parents check off the fruits and veggies you’d like to eat this week. Try some new fruits and vegetables this week!



Additional Activities for Grades K-2

1. Produce for Better Health Foundation at: www.fruitsandveggiesmorematters.org
2. For additional resources, such as books, videotapes and CDs, games, and educational kits, contact the Florida Department of Education, Food and Nutrition Resource Center at 1-800-504-6609. Resources are available free of charge and include postage.

References

U.S. Department of Agriculture, MyPyramid Food Guidance System, at www.MyPyramid.gov
Florida Interagency Food and Nutrition Committee at www.fifnc.com
Produce for Better Health Foundation at www.fruitsandveggiesmorematters.org

Elementary Lesson (continued)

Grades 3-5

Goals

1. To teach children about the importance of eating a colorful variety of fruits and vegetables.
2. To encourage children to eat more fruits and vegetables.

Objectives

1. Students will be able to name and identify foods in the fruit group and in the vegetable group.
2. Students will develop an awareness and knowledge of the importance of eating a colorful variety of fruits and vegetables everyday.
3. Students will write a 24-hour food recall of foods they have eaten from the fruit group and from the vegetable group.
4. Students will be able to list at least two vegetables in each of the vegetable sub-groups:
 - dark green vegetables
 - orange vegetables
 - dry beans and peas
 - starchy vegetables
 - other vegetables
5. Students will be able to name at least 8 to 10 different fruits including berries, citrus fruit, melons, pomes, and some fruits that have one big seed in the middle (stones).



Activity 1: Introduction to fruits and vegetables

Materials needed

- Photographs and/or food models of various fruits and vegetables. The color photos of the fruit and veggie food galleries of www.MyPyramid.gov could be used for this and/or a colorful assortment of fresh fruits and veggies could be used.
- Crayons or coloring pencils.
- Fruits & Veggies—More Matters Coloring Pages #1-5 (These are available beginning on page 58 of this Resource Manual.)

Discussion

1. Display the photos, food models or actual fruits and vegetables. Ask a variety of questions such as:
 - “Who likes fruits and vegetables?”
 - “How many did you eat yesterday?”
 - “What fruits do you enjoy as snacks?”
 - “What veggies do you enjoy as snacks?”
 - “Who knows what this is?”
 - “Is it a fruit or a vegetable?”
 - “How many of you have eaten this fruit or vegetable?”
 - “What fruits do you enjoy in salads?”
 - “What vegetables do you enjoy in salads?”

Elementary Lesson (continued)

Grades 3-5 (continued)

- Distribute the coloring pages and tell students to color the Fruit & Veggie Color Champions™: Big Pauly™, Raoul™, Yaz O'Frazz™, Greta™, and Winonna™. Explain to students that these coloring pages feature the five fruit and veggie color champions in these colors:
 - Yaz O'Frazz™—mostly orange clothing and shoes and yellow suspenders and yellow shoe laces.
 - Winonna™—mostly yellow and white with pink shoes.
 - Raoul™—mostly red with a red T-shirt, red shoes, and green leaves at the top of his head.
 - Greta™—mostly green with pink socks and pink shoe soles.
 - Big Pauly™—mostly blue and purple with a purple T-shirt.
- Fruits and vegetables are foods that grow on plants, trees, or in the ground. Fruits and vegetables are good for you because they are good sources of vitamins and minerals and also fiber. Vitamins, minerals, and fiber help you to stay healthy. Most fruits and vegetables are naturally low in calories. Some of the sauces, seasonings, or salad dressing that we use may add fat, calories and cholesterol. Always use moderation when such sauces, seasonings and dressings are used. Fruits and veggies are important sources of many nutrients. The many nutrients that fruits provide include potassium, dietary fiber, vitamin C and folate. The many nutrients that vegetables provide include potassium, dietary fiber, folate (folic acid), vitamins A, vitamin E, and vitamin C. It is best to eat a variety of fruits and veggies because different fruits and veggies are important sources of different nutrients! We should try to eat a colorful variety of fruits and vegetables every day.

Activity 2: What fruits and vegetables do you eat?

Materials needed

- Fruits & Veggies—More Matters Tracker & Shopping Planner Activity Sheets #1 and #2. (These activity sheets are available beginning on page 63 of this Resource Manual.)

Discussion

- Use the “Fruit & Veggie Eater Meter!” Tracker & Shopping Planner Activity Sheet #1 to talk about the different fruits and vegetables.
- It is important to eat a variety of fruits and vegetables because different fruits and vegetables provide different vitamins and minerals. Citrus fruits, like oranges, provide vitamin C, which helps to heal cuts and keep us from getting colds. Orange, yellow and dark green leafy vegetables provide vitamin A, which helps with our vision and helps to keep us healthy. There are many different fruits and vegetables that are an important part of a healthy diet. Do you eat a colorful variety of fruits and veggies every day or at least on most days of the week? Name some fruits for each of these types:

Examples

- Berries—blackberries
- Citrus—grapefruit
- Melons—honeydew melon
- Pomes—pears
- Stone fruit—nectarines (one big seed in the middle)

If you help your mother or father plan for vegetables, which ones could you suggest for each of these sub-groups?

Examples

- Dark green vegetables—collard greens
- Orange vegetables—sweet potatoes
- Dry beans and peas—kidney beans
- Starchy vegetables—white potatoes
- Other vegetables—asparagus

Elementary Lesson (continued)

Grades 3-5 (continued)

3. Give children the “Fruit & Veggie Tracker!” Tracker & Shopping Planner Activity Sheet #2 to take home to their parents. Tell the children that they can have their parents help them count the number of cups of fruits and vegetables that they eat each day. These fruits and vegetables can be in any form—fresh, frozen, canned, dried or 100% juice. At the end of each week total them up. Each time you increase your weekly eating total of fruits and vegetables by one or more, you can color a star at the bottom of the sheet. Three out of four stars will earn the child a Fruit & Veggie Color Champions™ Certificate. The teacher or the parent can download the certificate from www.fruitsandveggiesmorematters.org.

Activity 3: How Much is a Cup?

Materials needed

- Fruits & Veggies—More Matters “How Much is a Cup?” Activity Sheets #1-4:
 1. Fruit cup equivalents.
 2. Vegetables cup equivalents.
 3. Dried cup equivalents.
 4. Chopped, Mashed or Sliced cup equivalents.(These activity sheets are available beginning on page 54 of this Resource Manual.)

Discussion

1. How many fruits and vegetables do you need to eat each day? Children your age should have at least 1½ cups of fruit and 1½ to 2 cups of vegetables every day! We should choose a variety of fruits and vegetables in many different colors for good health.
2. Distribute the “How Much Is a Cup?” Activity Sheets and tell students to color the fruits and vegetables the correct colors.
3. Ask children to look at the “How Much is a Cup?” Activity Sheets. Talk about how much a cup is, the variety of colors of fruits and vegetables, and the different forms of fruits and vegetables.

Activity 4: Supermarket Scavenger Hunt Activity

Materials needed

- Tracker & Shopping Planner Activity Sheet #3—Weekly Shopping Planner.
- Supermarket Scavenger Hunt Game Sheets.
- Actual food items or photos of fruits and vegetables.

(The activity sheet is available on page 65, and the game sheets are available beginning on page 66 of this Resource Manual.)

Discussion

1. Ask the students to look at the “Weekly Shopping Planner” Activity Sheet. Then ask the students: Which fruits and vegetables are your favorites? Did you know you can have them fresh, frozen, canned, dried, and as 100% juice? When you and your parents go food shopping, help them check off the fruits and vegetables you’d like to eat this week. Also, try some new fruits and vegetables this week!



Elementary Lesson (continued)

Grades 3-5 (continued)

2. Distribute the Supermarket Scavenger Hunt cards to the class. Read off the list of fruits and vegetables shown below that are featured on the Supermarket Scavenger Hunt cards. Ask the students: Which they have tried? Which do they eat regularly?

Fresh

Fresh onions Fresh tomatoes Fresh carrots Fresh broccoli Fresh lettuce Fresh potatoes

Frozen

Frozen broccoli Frozen cauliflower Frozen spinach Frozen peas Frozen carrots
Frozen corn

Canned

Canned tomatoes Canned corn Canned pears Canned mushrooms Canned green beans
Canned peaches

Dried

Dried pineapple Dried bananas Dried raisins Dried apples Dried cranberries Dried plums

100% Juices

100% orange juice 100% grape juice 100% cranberry juice 100% pineapple juice 100% apple juice
100% tomato juice

3. Have the students make some additional Supermarket Scavenger Hunt cards using the blank sheets on page 70 of this Resource Manual. The student can draw some of the fruits and vegetables listed below. You may need to show the students a photo of the fruit or vegetable or the actual food item. Ask the students: How many of these foods have you seen? How many of these foods have you eaten?

Fresh

Fresh mangoes Fresh green pepper Fresh turnip greens Fresh yellow summer squash Fresh kiwi
Fresh oranges Fresh artichoke

Frozen

Frozen green peppers Frozen collard greens Frozen green beans Frozen strawberries Frozen okra
Frozen cherries

Canned

Canned kidney beans Canned asparagus Canned mixed vegetables Canned lima beans
Canned garbanzo beans Canned beets

Dried

Dried black-eyed peas Dried peaches Dried apricots Dried pears Dried mangoes

100% Juices

Apricot nectar Prune juice Mixed berry juice Pear nectar Vegetable juice Peach nectar

4. Go over some of the Supermarket Scavenger Hunt questions that are listed on page 68 of this Resource Manual. Tell the students that they can play this game with their parents and/or siblings when they go food shopping.

Elementary Lesson (continued)

Grades 3-5 (continued)

Activity 5: 24-Hour Recall of Fruits and Veggies

Materials needed

- What Fruits and Veggies Did You Have in the Last 24 Hours? handout. (This handout is available on page 71 of this Resource Manual.)

Discussion

1. How much is the recommended daily amount in MyPyramid for you?
2. How many fruits and veggies did you eat in the past 24 hours?
 - Morning
 - Midmorning
 - Noon
 - Mid-afternoon
 - Evening
 - Mid-evening

Additional Activities and Resources for Grades 3 to 5

1. Visit Produce for Better Health Foundation at: www.fruitsandveggiesmorematters.org
2. Visit USDA Team Nutrition at: www.teamnutrition.USDA.gov
3. For additional resources, such as books, videotapes and CDs, games, and educational kits, contact the Florida Department of Education, Food and Nutrition Resource Center at 1-800-504-6609. Resources are available free of charge and include postage.

References

U.S. Department of Agriculture, MyPyramid Food Guidance System, at www.MyPyramid.gov

Florida Interagency Food and Nutrition Committee at www.fifnc.com

Produce for Better Health Foundation at www.fruitsandveggiesmorematters.org

Sunshine State Standards

	Grades K-2	Grades 3-6
Health Education	HE.A.1.1	HE.A.1.2
Language Arts	LA.C.1.1	LA.C.1.2
Language Arts	LA.C.2.1	LA.C.2.2
Language Arts	LA.C.3.1	LA.C.3.2
Mathematics	MA.A.1.1	MA.A.1.2
Mathematics	MA.A.2.1	MA.A.2.2
Science	SC.A.1.1	SC.A.1.2



Teen Lesson

by Kari King, MHSE, RD
Coordinated School Health Program
Florida Department of Education

Goal

Pre-teens and teenagers will understand the importance of increasing fruit and vegetable consumption.

Objectives

1. Students will be able to identify two health benefits to consuming more fruits and vegetables.
2. Students will be able to identify their recommended intake of fruits and vegetables based on their age, sex, and activity level.
3. Students will be able to list three influences over their personal food choices.
4. Students will be able to promote fruit and vegetable intake to their peers.



Background Information

As the teacher of this material, consider reviewing some background information on the role fruits and vegetables play in disease prevention and health promotion. The Dietary Guidelines for Americans and Research Studies sections of this resource manual may be helpful. The general focus is on getting more fruits and vegetables in everyone's diet. Many young adults are not consuming enough fruits and vegetable to prevent diet-related diseases.

The activities that follow practice some of the skills necessary for students to become health literate adults. Please consider reviewing the revised National Health Education Standards at http://www.aahperd.org/aahe/pdf_files/standards.pdf.

Activity 1: How Many Fruits and Vegetables Do I Need?

Materials needed

- MyPyramid Daily Calorie Levels handout.
- MyPyramid Food Intake Patterns handout.
- MyPyramid Daily Worksheet handout.

(These handouts are available beginning on page 72 of this Resource Manual.)

Discussion

Eating a variety of fruits and vegetables every day is healthy for you. They provide vitamins and minerals essential to protect your health. Specifically, fruits and vegetables provide us with vitamins A, C, and folate, as well as minerals such as potassium, magnesium, and calcium. It is helpful to select a variety of colors, as each color tends to provide different and important nutrients. The more colors you eat daily, the better. In addition to providing us with vital nutrients, fruits and vegetables can protect us from health problems that often develop later in life. An increase in fruits and vegetables is associated with a reduced risk of chronic diseases like some cancers, heart disease, and diabetes.

Daily recommendations for fruits and vegetables depends on calorie needs. Calorie needs vary based on age, sex, and activity level. Pass out the "MyPyramid Daily Calorie Levels" handout to students so they can determine their individual calorie needs. Next, provide students with "MyPyramid Food Intake Patterns" handout and assist students in determining the amount of fruits and vegetables they should eat based on calorie needs.

Lastly, have students complete the "MyPyramid Daily Worksheet" handout based on the food and drink they consumed yesterday.

Teen Lesson (continued)

Activity 2: Increasing Fruits and Vegetables

Materials needed

- Fruit & Veggie Frenzy handout.
- Results from MyPyramid Daily Worksheet handout.
- MyPyramid Food Intake Patterns handout.

(These handouts are available beginning on page 73 of this Resource Manual.)

Discussion

Today's lesson will focus on students discovering ways to meet their recommended daily amounts of fruits and vegetables. Have students take out the "MyPyramid Daily Worksheet" handout, "My Pyramid Food Intake Patterns" handout, and pass out the "Fruit and Veggie Frenzy" handout. Assist students in completing this handout. Have a class discussion on the results.

Activity 3: Who Influences My Fruit and Vegetable Intake?

Materials needed

- Paper—1 sheet per student.

Discussion

There are many influences over decisions we make in our lives. Who influences the decisions you make? Think about the last time you went shopping for food at the grocery store. Did you want the foods you saw advertised on TV? What else might influence your decisions about the food you eat? Some other examples of influences might be your peers, family, culture, and the media.

Using the piece of paper provided, list three influences over your personal food choices. Are any of these influences negatively affecting your fruit and vegetable intake? For example, does a friend always try to convince you to eat cookies together as a snack? Is there anything you can do to change this negative influence into a positive one? Write about one of your negative influences and decide how it can be changed.

Activity 4: Write Your Own Fruit and Veggie Song or Rap

Materials needed

- Paper.

Discussion

Break the class into groups for this activity.

To make up your own fruit and veggie songs, follow these steps:

1. Select a familiar tune or decide to do a rap. Examples of familiar tunes might include: Jingle Bells; This Old Man; Twinkle, Twinkle Little Star; or Row, Row, Row Your Boat.
2. Write a simple objective, then make this objective into a simple first line, last line, or chorus of the song.
3. Outline a simple story stemming from your objective. List some key words from the story. Then build song verses around these words. As you write each verse, have your story unfold.
4. You can also add arm movements, foot movements, and/or dance steps, to "act out" the story.
5. You can also make your story into a rhyme, chant, or cheer.

Have groups present their songs or raps.

Teen Lesson (continued)

Activity 5: Fruit and Veggie Tasting Activity

Materials needed

- Fruits.
- Vegetables.
- Prepping utensils for produce.

Discussion

Tasting parties are a wonderful way to introduce new foods to adults and children. Consider hosting a Fruit and Veggie Tasting Party. Following are some suggested themes:

1. **Traditional Tasting Party:** Cut up different fruits and vegetables. Have students describe and compare tastes. Then make a fruit salad and vegetable salad. Eat the salads.
2. **Salad Contest:** Divide into teams. One team makes a Fruit Salad from five fruits. The other team makes a Vegetable Salad from five vegetables. The class judges them for first place, second place, third place, etc. and/or for special characteristics of the salad such as “most colorful,” “most creative,” “most variety,” etc. Then everyone eats the salads.
3. **International Fruit and Vegetable Party:** Have a tasting party with fruits and vegetables representing different ethnic or foreign preferences.
4. **Harvest Festival:** Have a celebration featuring fresh fruits and vegetables. Students dress up as farmers, and then sample the produce.



References

- Joint Committee on National Health Education Standards. National Health Education Standards: Achieving Excellence. American Cancer Society, 2007.
- Manahan L and Manahan M. Join the Fruit & Vegetable Party Activity Book. “Fruit & Vegetable Tasting Activities,” p. 27, Yummy Designs, 2000.
- Manahan L and Manahan M. Join the Fruit & Vegetable Party Activity Book. “Write Your Own F & V Songs” p. 38, Yummy Designs, 2000.
- Richards A, Kattelman KK, and Ren C. Motivating 18-24 Year-Olds to Increase Their Fruit and Vegetable Consumption. J Am Diet Assoc. 2006;106:1405-1411.
- Van Duyn MAS and Pivonka E. Overview of the health benefits of fruit and vegetable consumption for the dietetics professional: Selected literature. J Am Diet Assoc. 2000;100:1511-1521.

Teen Lesson (continued)

Sunshine State Standards

	Grades 6-8	Grades 9-12
Health Education	HE.A.1.3	HE.A.1.4
Health Education	HE.B.2.3	HE.B.2.4
Health Education	HE.C.1.3	HE.C.1.4
Health Education	HE.C.2.3	HE.C.2.4
Language Arts	LA.A.1.3	LA.A.1.4
Language Arts	LA.A.2.3	LA.A.2.4
Language Arts	LA.B.1.3	LA.B.1.4
Language Arts	LA.B.2.3	LA.B.2.4
Language Arts	LA.C.2.3	LA.C.2.4
Mathematics	MA.A.1.3	MA.A.1.4
Science	SC.F.1.3	SC.F.1.4
Physical Education	PE.A.1.3	PE.A.1.4
Dance	DA.A.1.3	DA.A.1.4
Music	MU.B.1.3	MU.B.1.4



Adult Lesson

by Sondra Cornett, MS, RD, LD
Bureau of WIC and Nutrition Services
Florida Department of Health

Goal

The goal of this lesson is to encourage adults to eat more fruits and vegetables for good health.

Knowledge Objectives

1. Participants will be able to identify a variety of fruits and vegetables.
2. Participants will know why it is important to include a variety of fruits and vegetables in their food choices.

Behavioral Objectives

1. Participants will learn ways to increase fruits and vegetables in daily food choices.
2. Participants will set a nutrition-based goal to work towards to increase consumption of fruits and vegetables.



Background Information

Four and one-half cups of fruits and vegetables are recommended daily for the reference 2,000-calorie level, with higher or lower amounts depending on the caloric level. Fruits and vegetables provide a variety of nutrients and fiber. In the fruit group, eating whole fruits (fresh, frozen, canned, dried) rather than fruit juice for the majority of the total daily amount is suggested to ensure adequate fiber intake. Different vegetables are rich in different nutrients. In the vegetable group, weekly intake of specific amounts from each of five vegetable subgroups that include dark green vegetables, orange vegetables, legumes (dry beans), starchy vegetables, and other vegetables is recommended for adequate nutrient intake. Each subgroup provides a somewhat different array of nutrients. In the MyPyramid food guidance system at the reference 2,000-calorie level, the following weekly amounts are recommended:

Dark green vegetables	3 cups per week
Orange vegetables	2 cups per week
Legumes (dry beans)	3 cups per week
Starchy vegetables	3 cups per week
Other vegetables	6½ cups per week

Most current eating patterns of Americans do not achieve the recommended intakes of many of these vegetables. The MyPyramid food guidance systems suggests increasing intakes of dark green vegetables, orange vegetables, and legumes (dry beans) as part of the overall recommendation to have an adequate intake of fruits and vegetables.

Many of the fruits, vegetables, and legumes (beans) are considered to be important sources of vitamin A (as carotenoids), vitamin C, and potassium in the adult population. Intakes of these nutrients, based on dietary intake data or evidence of public health problems, may be of concern. Also listed are sources of naturally occurring folate, a nutrient considered to be of concern for women of childbearing age and those in the first trimester of pregnancy. Folic acid-fortified grain products, not listed below, are also good sources.

Sources of vitamin A (carotenoids)

- Bright orange vegetables like carrots, sweet potatoes, and pumpkin
- Tomatoes and tomato products, red sweet pepper
- Leafy greens such as spinach, collards, turnip greens, kale, beet and mustard greens, green leaf lettuce, and romaine
- Orange fruits like mango, cantaloupe, apricots, and red or pink grapefruit

Adult Lesson (continued)

Sources of vitamin C

- Citrus fruits and juices, kiwi fruit, strawberries, guava, papaya, and cantaloupe
- Broccoli, peppers, tomatoes, cabbage (especially Chinese cabbage), brussels sprouts, and potatoes
- Leafy greens such as romaine, turnip greens, and spinach

Sources of folate

- Cooked dry beans and peas
- Oranges and orange juice
- Deep green leaves like spinach and mustard greens

Sources of potassium

- Baked white or sweet potatoes, cooked greens (such as spinach), winter (orange) squash
- Bananas, plantains, many dried fruits, oranges and orange juice, cantaloupe, and honeydew melons
- Cooked dry beans
- Soybeans (green and mature)
- Tomato products (sauce, paste, puree)
- Beet greens

Activity 1: Foods I Have Tried

This activity works well as an introduction.

1. Have each participant tell the group his/her name.
2. Have participants think about a time and place where they had tried a new fruit or vegetable.
3. Ask them to think about what it tasted like, whether they liked the food, and whether they have eaten it again.
4. Allow time for each participant to share his/her story.



Activity 2: Three Simple Steps to Eating More Fruits and Vegetables

Materials needed

- Three Simple Steps to Eating More Fruits and Vegetables handout (This handout is available on pages 99-100 of this Resource Manual.)
- To show participants portion sizes of fruits and vegetables, have food models, actual fruits and vegetables, or print out photos of portion sizes of fruits and vegetables from www.fruitsandveggiesmatter.gov.
- What Changes Will You Make? handout (This handout is available on page 81 of this Resource Manual.)

Discussion

Distribute the handouts to each participant and then discuss the following:

Eating a variety of fruits and vegetables every day is healthy for you. They have vitamins and minerals that can help protect your health. Most are also lower in calories and higher in fiber than other foods. As part of a healthy diet, eating fruits and vegetables instead of high-fat foods may make it easier to control your weight.

Step 1: Find out how many fruits and vegetables you need to eat everyday. Most adult women need about 1½ cups of fruits and 2½ cups of vegetables each day. Most adult men need about 2 cups of fruits and 3 cups of vegetables each day. These amounts are for less active people. People who are more active will need more fruits and vegetables each day.

Adult Lesson (continued)

Step 2: Learn what 1 cup and ½ cup of a fruit or vegetable looks like. Show food models or actual samples of fruits and vegetables. Show food models, actual foods, or pictures of fruits and vegetables from the CDC website that show what 1 cup or ½ cup looks like.

Step 3: See how you can add fruits and vegetables into your day as part of a healthy diet. Here are examples:

Breakfast

- Add some fruit to your cereal.
- Stir low-fat or fat-free granola into a bowl of low-fat or fat-free yogurt. Top with sliced apples or frozen berries.
- Top toasted whole wheat bread with peanut butter and sliced bananas.
- Add vegetables, such as diced tomatoes and onions, to your egg or egg white omelet.

Snacks

- Eat a piece of fruit like an apple, banana, or plum.
- Place a box of raisins in your child's backpack and pack one for yourself, too.
- Put grapes and banana slices on wooden skewers and freeze for "fruit on a stick."
- Choose raw vegetables as an afternoon snack.

Lunch and Dinner

- Ask for less cheese and more vegetable toppings on your pizza. Try onions, mushrooms, and bell peppers.
- Spread low-fat cheese and low-fat or fat-free refried beans between two whole wheat tortillas. Brown on both sides in a pan until cheese melts. Top with salsa.
- Eat at least two vegetables with dinner.
- Add frozen vegetables like peas and broccoli to a casserole or pasta.
- Have fruit for dessert.

After reviewing the handout, ask participants for ideas on how each of them can add more fruits and vegetables to their daily eating. Then ask participants to set one or more goals related to changes they will make in the next month to increase their consumption of fruits and vegetables. Use the "What Changes Will You Make?" handout that will give them some ideas for goals they can set.

Activity 3: Eat More Fruits and Veggies

Materials needed

- Eat More Fruits and Veggies handout. (This handout is available on pages 87-88 of this Resource Manual.)

Discussion

Distribute the handout to each participant and then discuss the following:

You probably already know that a healthy diet includes a variety of fruits and vegetables. A good source of vitamins and minerals, many fruits and vegetables are lower in calories and higher in fiber than other foods. As part of a healthy diet, eating fruits and vegetables instead of high-fat or high-calorie foods may make it easier to control your weight.

Too busy? See how you can save time, save money, or both as you strive to eat more fruits and vegetables as part of a healthy diet.

Save Time

- Pick fruits or veggies that require little peeling or chopping, such as baby carrots, cherry tomatoes, or grapes.
- Prepare extra vegetables and freeze leftovers for quick sides. Simply heat to 165°F and serve.



Adult Lesson (continued)

- Choose ready-packed salad greens from the produce shelf for a quick salad any time.
- Visit the salad bar for pre-cut veggies to top salads, sandwiches, or pasta.

Save Money

- Take advantage of in-store promotions and purchase fresh fruits and vegetables in season, when they are generally less expensive.
- Prevent food waste by properly storing produce and selecting the type and amount you will consume.
- Buy in bulk. Freeze excess, or purchase frozen, canned, or dried varieties that keep longer.
- Shop the local farmers' market or visit nearby farms and pick your own fresh produce while in season.

Save Both Time and Money

- Plan meals ahead and create a shopping list to help minimize impulse purchases.
- Buy in bulk and prepare extra or larger amounts. Freeze individual or family-size portions for later use.
- Make vegetable-based one-pot meals using beans instead of higher cost protein sources, such as meat, fish, or poultry. One-pot meals also reduce the number of pans and other utensils that must be washed, saving you time.
- Keep it simple. Choose quick and easy recipes with few ingredients that use in-season, canned, frozen, or dried fruits and vegetables.

Activity 4: Vegetable Scramble and Finding Fruit on the Menu

Have participant complete the Vegetable Scramble and Finding Fruit on the Menu word puzzles. (These word puzzles and answer keys to the puzzles are available beginning on page 77 of this Resource Manual.)

Activity 5: Eat Your Colors

Use the information in Activity 3 on page 44 of this Resource Manual to give a presentation about eating your colors.

References

Dietary Guidelines for Americans 2005

Fruits and Vegetables, Nutrition for Everyone; Centers for Disease Control and Prevention at http://www.cdc.gov/nccdphp/dnpa/nutrition/nutrition_for_everyone/quick_tips/fruit_vegetable.htm

Fruit Group and Vegetable Group; Wellness Ways Resource Book, University of Illinois Extension. <http://wellnessways.aces.uiuc.edu>



Older Adult Lesson

by Linda Miles, RD, LD, Department of Elder Affairs and
Jo Shuford-Law, CFCS, LD, University of Florida/IFAS
Extension-Leon County

Goals

- To help older adults select a wider variety of fruits and vegetables.
- To have older adults include a larger quantity of fruits and vegetables in their meals and snacks.

Objectives

Older adults who participate in this lesson will:

- Know the amounts of fruits and vegetables recommended daily.
- Know that selecting a variety of fruits and vegetables may protect from chronic disease.
- Be motivated to include the recommended amounts of fruits and vegetables in daily meals and snacks.
- Share information learned with friends and/or family.



Concept

Most people do not consume enough fruits and vegetables. A diet high in fresh produce is associated with decreased risks for chronic diseases. In addition, as fruits and vegetables have a lower energy density (fewer calories per weight of food), eating them can be beneficial for weight management. Analyzed data from the 2005 Behavioral Risk Factor Surveillance System (BRFSS) indicated that 33% of adults between the ages of 55 to 64, consumed fruit two or more times per day and only 30% ate vegetables three or more times per day. There is a need to continue to encourage greater fruit and vegetable consumption among the older adults in the United States.

The *Dietary Guidelines for Americans 2005* include the following key recommendations for older Americans:

- Consume a sufficient amount of fruits and vegetables while staying within recommended energy needs. Two cups of fruit and 2½ cups of vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on calorie intake.
- Choose a variety of fruits and vegetables each day. In particular, select four vegetable subgroups (dark green, orange, legumes, starchy vegetables, other vegetables) several times a week.

Nutrition is central to health promotion, disease prevention, and disease management. The impacts of poor diets and malnutrition on health and functionality include quality of life, independence, and financial concerns.

Activity 1: How Much Do We Need?

In advance of the class, post a MyPyramid wall poster. (This poster is available at <http://bookstore.gpo.gov/actions/GetPublication.do?stocknumber=001-000-04721-3>.)

Distribute a blank piece of paper to each participant.

Instructions to the participants:

At the top of the paper, write down all the fruits you had to eat yesterday. Then, draw a horizontal line across the middle of the paper and write down all the vegetables you also ate yesterday.

Most people don't consume enough fruits and vegetables and because we know that eating more fruits and vegetables can improve the quality of our diets, we will be discussing the Fruits & Veggies—More Matters health initiative.

Older Adult Lesson (continued)

Using the MyPyramid poster, discuss the recommended amounts of fruits and vegetables to be eaten daily based on gender, age, and activity level. Distribute the MyPyramid for Older Adults handout. Discuss that the recommendations on the handout are for a 1,800-calorie daily eating plan. As we age, a reduction in calories is often needed. Check out the fruit and vegetable recommendations for the 1,800-calorie daily eating plan. The total daily amount needed is 4 cups—2½ cups of vegetables and 1½ cups of fruits.

Questions to ask participants:

- How many different varieties of vegetables did you eat yesterday?
- How many different varieties of fruits did you eat yesterday?
- What was the total amount of vegetables you ate yesterday?
- How much fruit did you eat yesterday?
- How did your amounts compare with the recommendations?

Activity 2: What does 4 to 5 cups of fruits and vegetables look like?

Ask for a volunteer and/or the teacher can demonstrate the following:
Illustrate the daily recommended 4 to 5 cups of fruits and vegetables by displaying actual foods or food models that add up to 4 cups of fruits and vegetables. An example of a total of 4 cups of fruits and vegetables could be the following: 16 grapes, ½ cup frozen peas, ½ large sweet potato, ½ cup cherry tomatoes, 12 carrots, 1 apple. This is the recommended amount of fruits and vegetables to be eaten each day when you are consuming a 1,800-calorie daily eating plan.

Continue the demonstration by distributing the food over several paper plates to indicate the 4 cups of fruits and vegetables that would be eaten throughout the day.

Questions to ask participants:

- Do you usually eat this amount of fruits and vegetables at a meal?
- If you don't, what are some ways to add a little more fruits and vegetables to your daily meals and snacks?

Activity 3: Eat Your Colors

In advance of the class, download the “Eat Your Colors” presentation from www.FIFNC.com.

Consuming fruits and vegetables can reduce the risk of chronic diseases such as: stroke, cardiovascular diseases, type 2 diabetes, and certain types of cancer (pharynx, larynx, lung, esophagus, stomach, colon, rectum). Fruits and vegetables contain vitamins, minerals, and other compounds that may have beneficial effects on health. Fiber from fruits and vegetables (and also from whole grains) may reduce risk of coronary heart disease and improve laxation.

Present “Eat Your Colors,” an adapted version of a University of Nebraska Extension’s presentation, accompanied by a discussion on the importance of eating a variety of colorful fruits and vegetables.

Eat Your Colors Talking Points

Think of a rainbow. Imagine all the beautiful colors. Think of how beautiful it is to look at a rainbow. Your meal should have the same kind of appeal that the rainbow has with many colors. What is pleasing to the eye is also pleasing to the palate.

The more colors on the plate, the more healthful the diet can be. Having a variety of colors on the plate helps you get the full complement of nutrients that “mother nature” has to offer. Fruits and vegetables provide us with vitamins A, C, and folate. They also provide us with fiber and a whole host of necessary minerals like potassium, magnesium, and calcium.

Growing up you may have been told to eat your greens, but what about your reds, oranges, yellows, and blues? By putting something of every color on your plate or in your lunch bag, you are more likely to eat the recommended amounts of vegetables and fruits every day. The more reds, oranges, greens, yellows, and blues you see on the

Older Adult Lesson (continued)

plate, the more health promoting properties you are also getting from your vegetable and fruit choices.

Reds: When you add deep reds or bright pinks to your daily diet, you are also adding a powerful antioxidant called lycopene. Lycopene is found in tomatoes, red and pink grapefruit, watermelon, papaya, and guava. Diets rich in lycopene are being studied for their ability to fight heart disease and some cancers.

Greens: Do you know why this color is so essential to your diet? Not only do green vegetables look great and taste wonderful, but they are also loaded with essential vitamins (folate), minerals, and fiber.

Oranges: Orange, the color of a blazing sun, is a must-have in your daily diet. Orange vegetables and fruits like sweet potatoes, mangos, carrots, and apricots, contain beta-carotene. Eating food high in beta-carotene may help strengthen your immune system. Folate, most often found in leafy greens, is also found in orange fruits and vegetables, and is a B vitamin that may help prevent some birth defects and reduce the risk of heart disease.

Yellows: Bright yellows have many of the same perks as the orange groups. Grapefruit, for example, is rich in vitamin C. Corn and pears are high in fiber. Yellow fruits and vegetables belong to many different families, but they all share the common bond of providing good health with great taste. Go for the gold!

Blues & Purples: Blues and purples not only add beautiful shades of color to your plate, they have compounds that may reduce your risk of cancer. Blueberries, in particular, are rich in vitamin C and high in fiber and potassium as well.

Whites: White vegetables include the onion family: garlic, chives, scallions, and leeks. Research is looking at how compounds in these vegetables may help lower cholesterol and blood pressure and increase the body's ability to fight infections.

There is color in every season. When it comes to your health, you'll fare best with a multi-colored diet. By putting something of every color on your plate or in your lunch bag, you are more likely to eat the recommended amounts of fruits and vegetables every day.

Activity 4: A Rainbow Plate (optional)

In advance, prepare a tray of fresh, colorful fruits and vegetables for tasting. Include familiar and unusual foods and serve both fruits and vegetables on the same tray to indicate that these foods do not have to be placed in separate serving containers. Group the foods by color.

Final Comments

Now that you can visualize the recommended daily portions of fruits and vegetables and how they look on your plate you can begin to take steps to move to a healthier you by including the variety of foods necessary for good nutritional health. Use these images to make wise choices about amounts of food to eat. Start today for a healthier tomorrow.

So when you make a plate of food for yourself, make your plate as colorful as possible. Try to eat a rainbow of colors everyday. This will help to ensure your good health. The more colors you eat, the better. The good nutrition found in fruits and vegetables is needed by our bodies daily. Don't short yourself the nutrients you need. Treat yourself to a colorful variety of fruits and vegetables. You deserve this special treatment because you are a special person.



Older Adult Lesson (continued)

Suggested Handouts

MyPyramid for Older Adults—available from UF/IFAS.

Tips to Help You Eat Vegetables and Tips to Help You Eat Fruits. (These handouts are available on pages 82-85 of this Resource Manual.)

Three Simple Steps to Eating More Fruits and Vegetables. (This handout is available on page 99 of this Resource Manual.)

How Many Fruits and Vegetables Do You Need? (available from http://www.fruitsandveggiesmorematters.org/?page_id=71)

Supplies/Equipment

MyPyramid Poster (This is available at <http://bookstore.gpo.gov/actions/GetPublication.do?stocknumber=001-000-04721-3>.)

Real food or food models (4 to 5 cup portion is necessary)

“Eat Your Colors” presentation (adapted from University of Nebraska, Lincoln Extension) available at www.FIFNC.com

Computer/LCD projector or overhead projector

The Color Way background information (adapted from Pinellas County Extension Family Nutrition Program, Pinellas County WIC Program, and Pinellas Strong Hearts)

Colorful Fruit and Vegetable Tray (optional)

Napkins

Toothpicks

References

<http://www.mypyramid.gov>

<http://www.fruitsandveggiesmorematters.org>

Dietary Guidelines for Americans 2005 available at www.healthierus.gov/dietary-guidelines

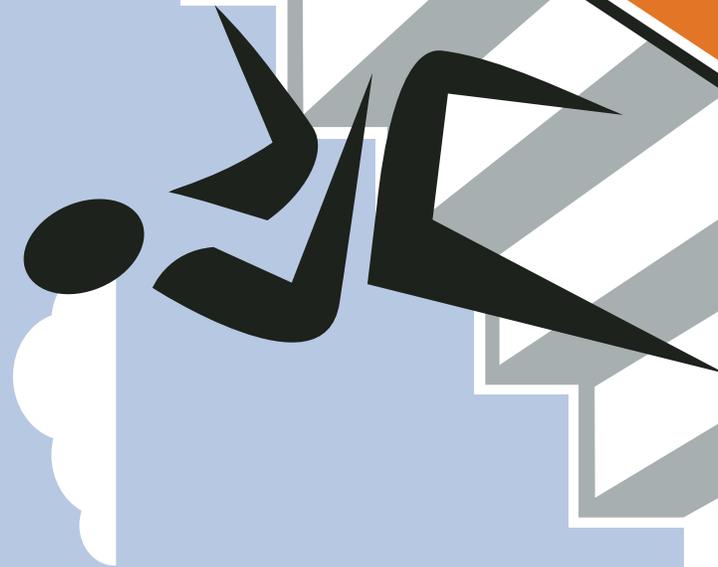
CDC Morbidity and Mortality Weekly Report (MMWR), March 16, 2007

University of Nebraska, Lincoln Extension, <http://lancaster.unl.edu/food/farmar.shtml>

MyPyramid

STEPS TO A HEALTHIER YOU

MyPyramid.gov



GRAINS

VEGETABLES

FRUITS

MILK

MEAT & BEANS

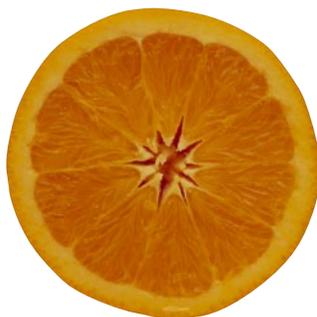
Script for Interview with Mr./Ms. Broccoli

- Interviewer:** Boys and girls we have a special visitor with us today—Mr./Ms. Broccoli.
- Introduce Mr./Ms. Broccoli to each of the children – maybe shake their hand!**
- Interviewer:** Mr./Ms. Broccoli we understand that you are very healthy.
- Mr./Ms. Broccoli:** **(Looks very proud)** Oh yes – that is true, I am very healthy!
- Interviewer:** What makes you so healthy?
- Mr./Ms. Broccoli:** I have lots of vitamin A and vitamin C. Did you know that vitamin A helps me to have healthy eyes **(point to eyes)** and skin **(rub arms)**? Did you know that vitamin C helps me not get colds **(pretend to sneeze)**?
- Interviewer:** Mr./Ms. Broccoli please forgive me, but I've heard that some people **(look worried and lower voice)** don't like you.
- Mr./Ms. Broccoli:** **(Dab eyes with a tissue. Sniffle and look tearfully)** Yes, I know there are people who don't like me and it really hurts my feelings. They could at least give broccoli a little try every now and then until they do like me.
- Interviewer:** **(Pat Mr./Ms. Broccoli on the back)** Now, now Mr./Ms. Broccoli it's okay! **(trying to cheer up Mr./Ms. Broccoli say):** Hey – how many wonderful ways are there to eat broccoli?
- Mr./Ms. Broccoli:** **(Starting to feel better)** Oh...broccoli can be eaten raw with dip or steamed with shredded cheese on top or even cooked in a casserole with chicken, mmmm—broccoli is very yummy!
- Interviewer:** Mr./Ms. Broccoli we want to thank you for visiting with us today. Let's show Mr./Ms. Broccoli how much we like him/her by clapping! How else can we show her we like her? **(Encourage the children to say "by tasting and eating more broccoli!")**

Vegetables and Fruits for
"The Shoe Box Garden" and
"The Garden Game"



Apple



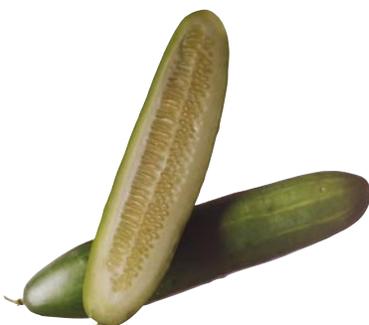
Grapefruit



Asparagus



Cauliflower



Cucumbers



Lettuce



Lemon



Celery



Pepper

Vegetables and Fruits for
"The Shoe Box Garden" and
"The Garden Game"



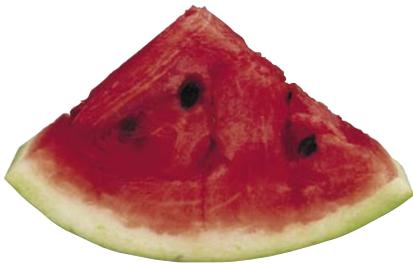
Blueberries



Corn



Cantaloupe



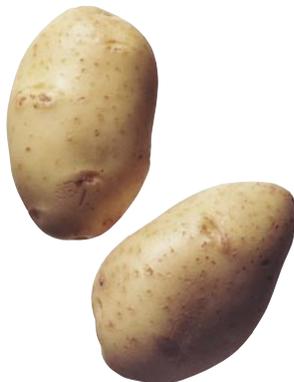
Watermelon



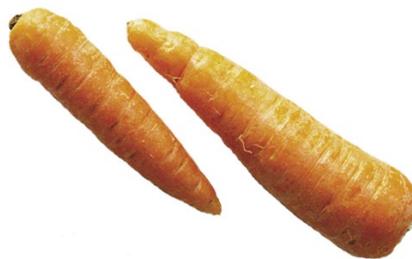
Tomatoes



Broccoli



Potatoes



Carrots



Banana

Vegetables and Fruits for "The Shoe Box Garden" and "The Garden Game"



Avocado



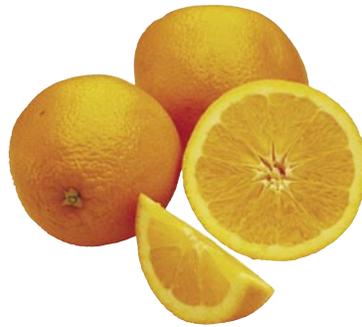
Strawberries



Artichoke



Eggplant



Oranges



Okra



Pumpkin



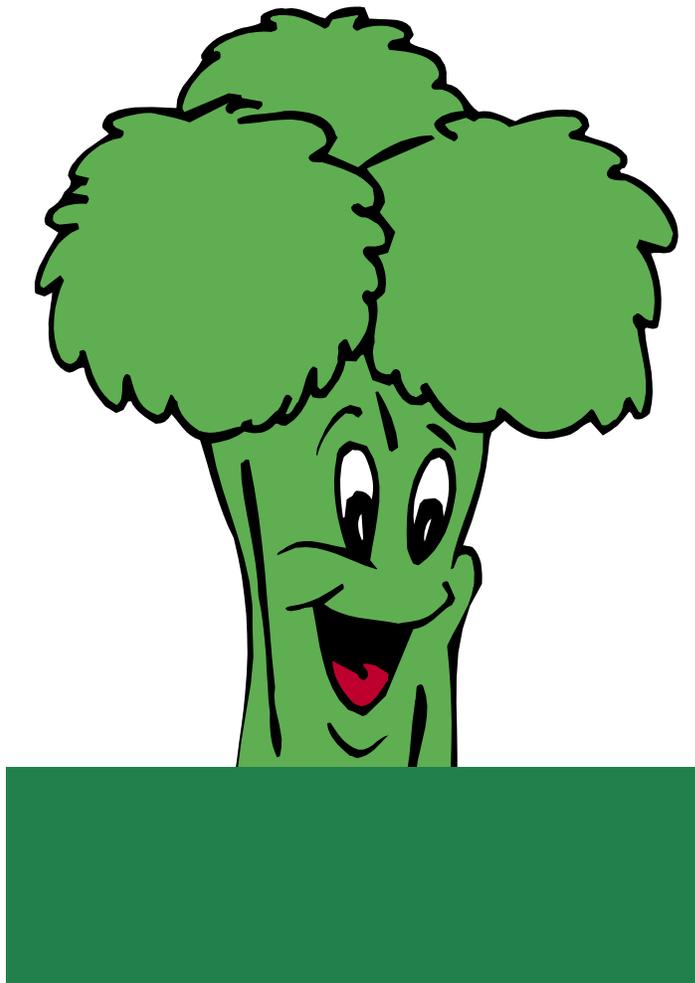
Zucchini



Peaches

Making a Broccoli Crown

Instructions: Fold a piece of green construction paper into thirds (accordion or fan style). Cut out the broccoli pattern below. Trace the pattern onto the top of the accordion-folded green paper and cut it out so when it is opened it has a row of 3 broccoli heads. Repeat this process with another piece of green paper. Now you have 2 rows of 3 broccoli heads. Tape the 2 rows together to make a broccoli crown.





Dear Parents or Guardians,

Your child has been learning about the importance of eating fruits and vegetables every day from our lesson, "It's fun to eat fruits and vegetables." We have learned about a variety of fruits and vegetables and the children have been made aware of the different places to find them. Your child has also been learning about how the fruit group and the vegetable group are part of MyPyramid.

One great way to enjoy many of Florida's fruits and vegetables is to grow them as a family. While you're together, you have a chance to explain the life cycle of a seed or discuss the types of bugs you find. Let kids take the lead while you supply the background information. It's in the storytelling that kids learn about gardening and the world. Don't know all the answers? No one does. Library trips are part of the journey.

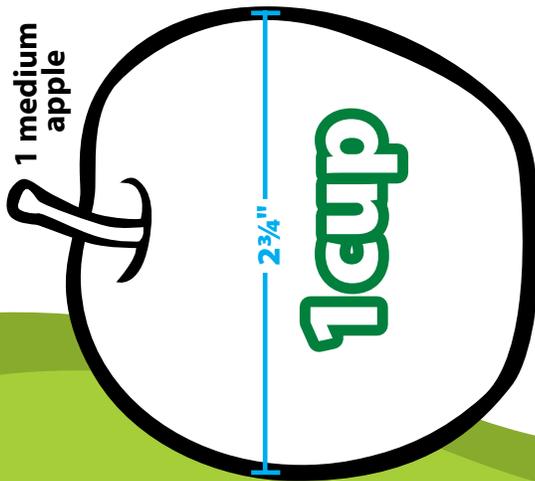
Not into gardening? Don't have the room? That's okay too; you don't need to plant your own garden to enjoy fresh fruits and vegetables all year long. We are fortunate here in Florida to have so many great varieties and choices to eat all of the time. Tip: buy in season to save money! During the warmer months buy foods such as beans, peppers, cantaloupe or watermelon. During the cooler months, buy foods like broccoli, carrots, or cabbage. You can also keep frozen and canned fruits and vegetables on hand to add to the variety of fruits and vegetables you are eating.

Making sure your children enjoy different types of fruits and vegetables every day is vital to building strong bodies and encouraging healthy eating habits. Remember, children look to you as a role model, so it's important for you to eat these healthy foods as well!

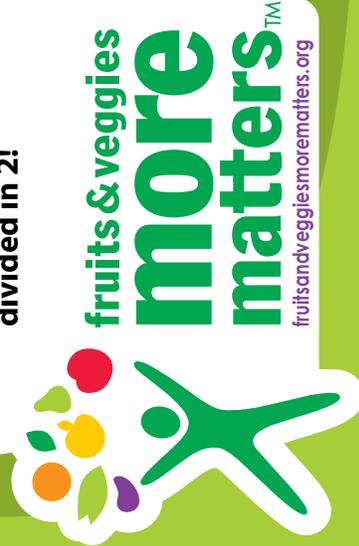
Sincerely,

Fruit

cup equivalents



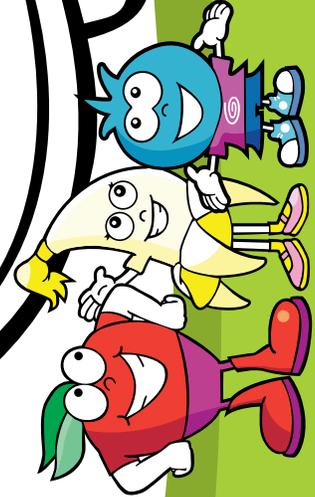
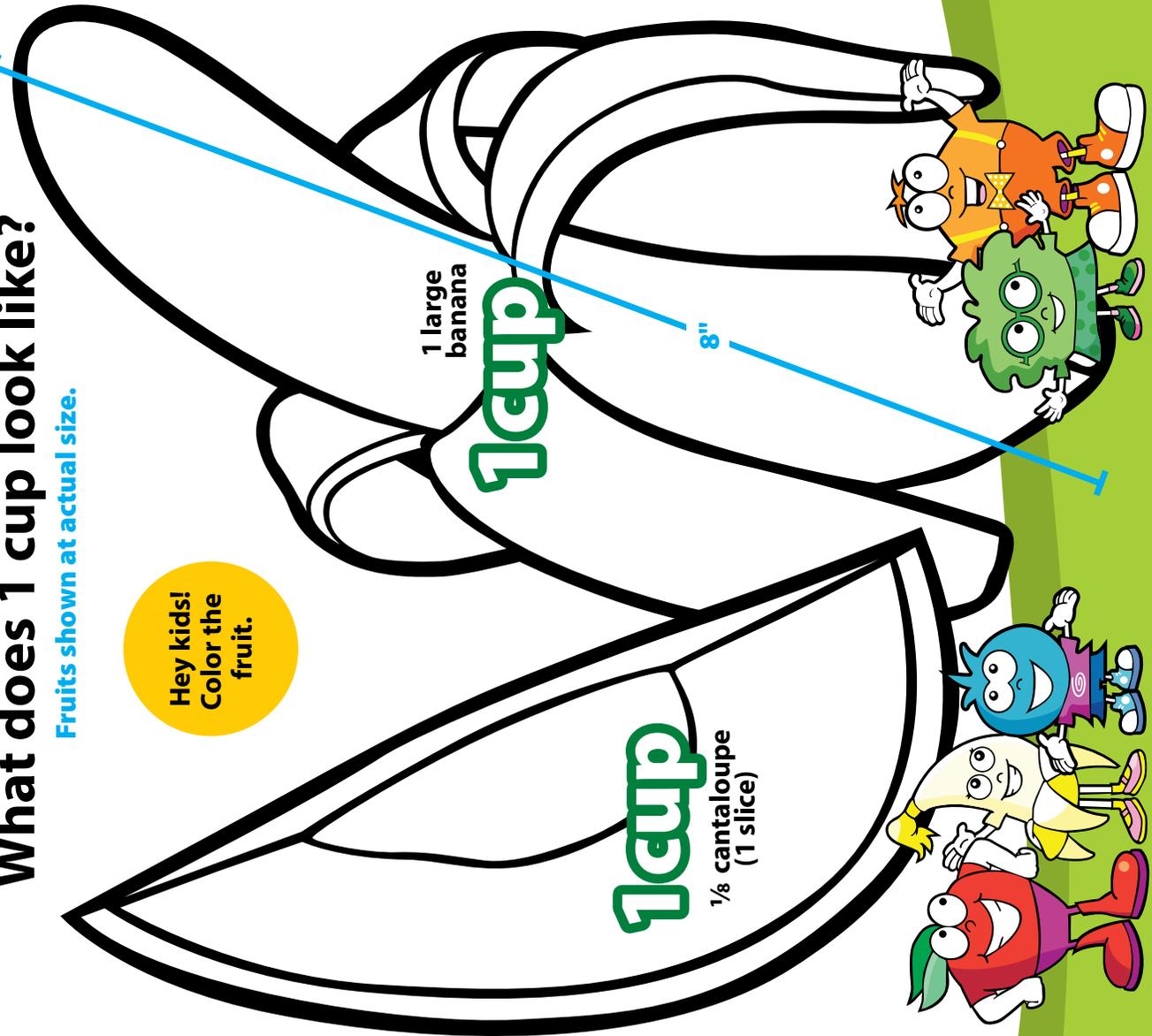
What about 1/2 cup?
That's just 1 cup
divided in 2!



What does 1 cup look like?

Fruits shown at actual size.

Hey kids!
Color the
fruit.



Vegetables

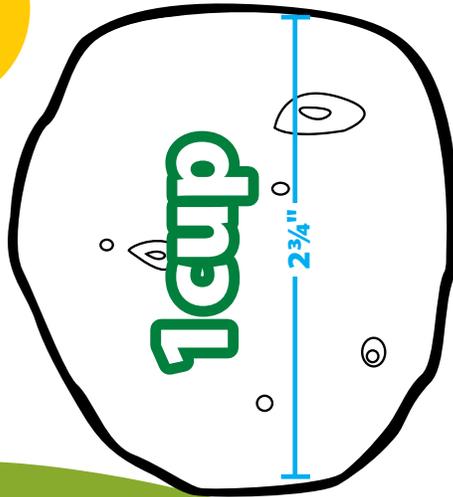
cup equivalents

What does 1 cup look like?

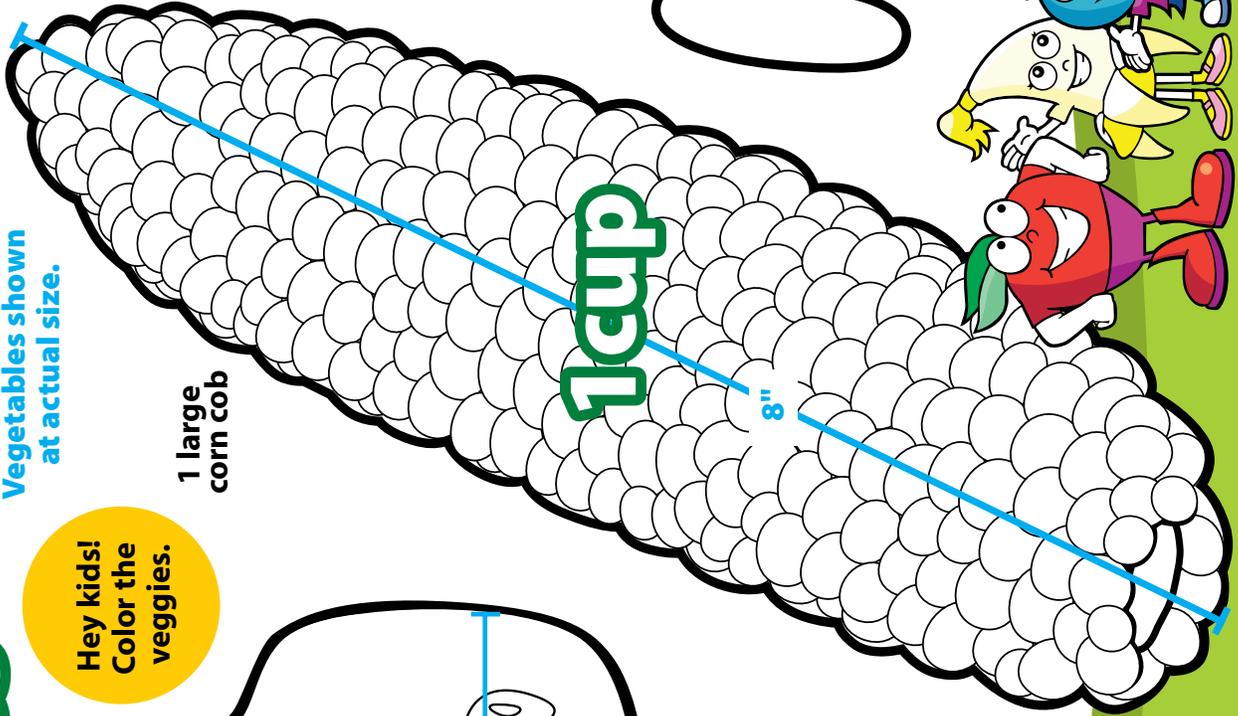
Vegetables shown at actual size.

Hey kids!
Color the
veggies.

1 small potato



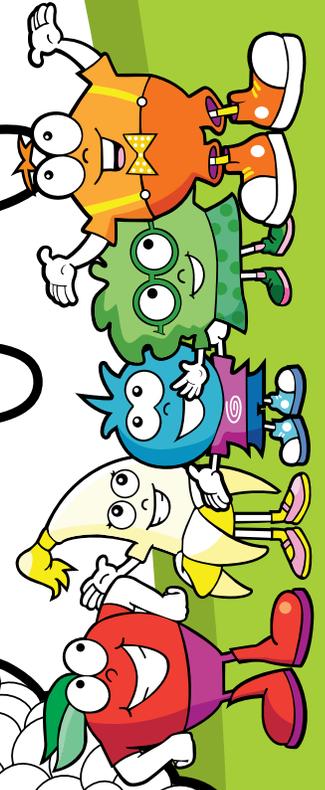
1 large corn cob



12 baby carrots



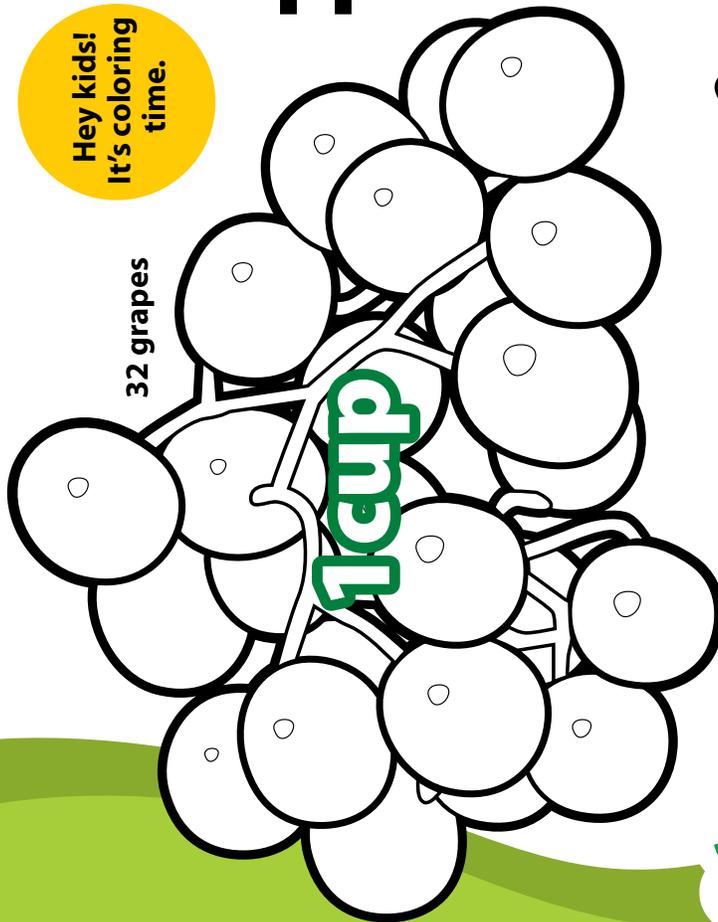
What about 1/2 cup?
That's just 1 cup
divided in 2!



Dried

cup equivalents

1 cup fresh is equivalent to 1/2 cup dried!



32 grapes

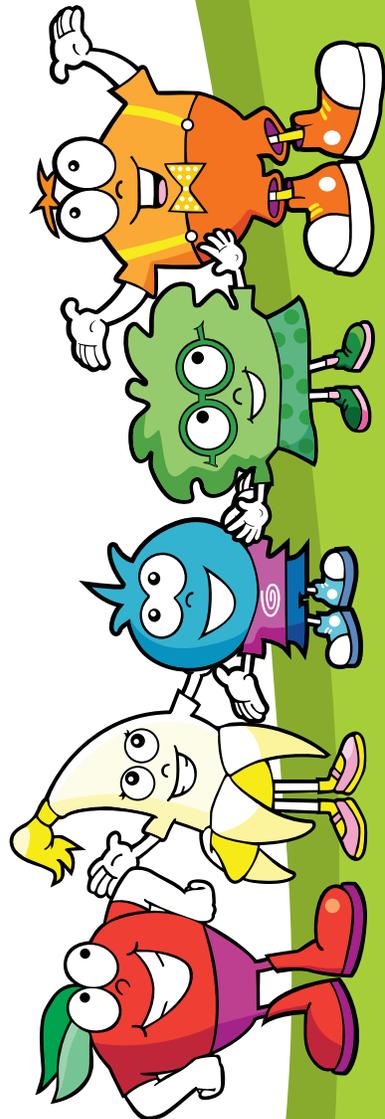
1 cup

Hey kids!
It's coloring
time.

1/2 cup raisins



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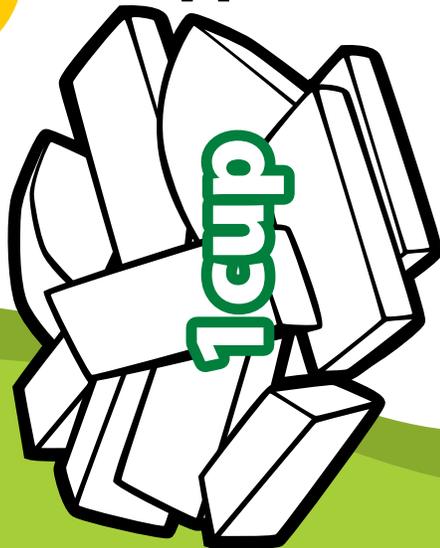


Chopped, Mashed or Sliced

cup equivalents

1 cup measures volume not shape

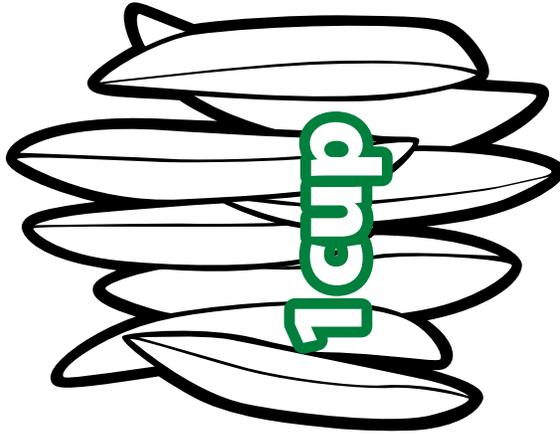
Hey kids!
Have fun
coloring.



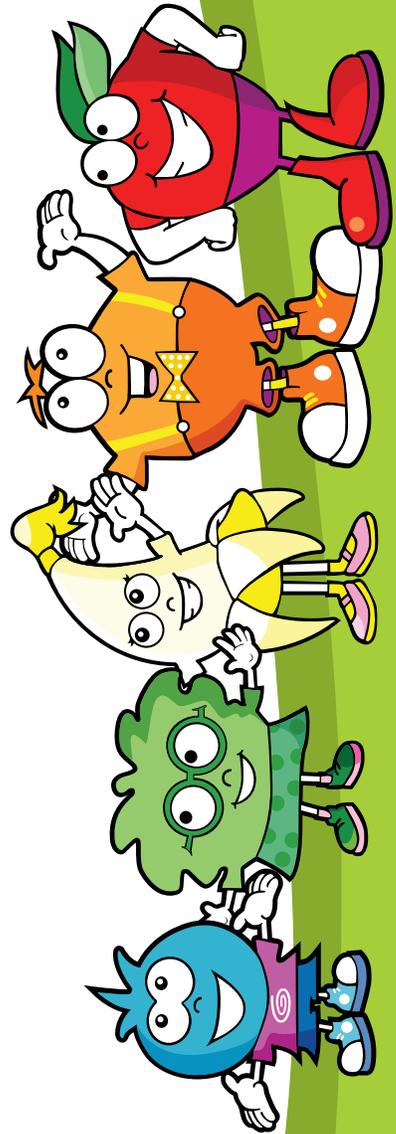
1 cup chopped yam



1 cup mashed yam



1 cup sliced yam



Eat, Play, Win

with fruits and veggies!



Power your day

the fruit and veggie way!



