

Teacher:

School:

November’s Healthy Habits Campaign Message is:

Be kind to your body – eat a rainbow of fruits and vegetables every day!

Healthy eating habits are an important component of lifelong health. One of the best ways to make sure you eat a healthy variety of fruits and vegetables – and all the nutrients that they provide – is to “eat a rainbow”. To promote March’s healthy habit, this packet contains:

“Eat a Rainbow” Activities and Resources	Time Needed:	Page Number:
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Educational Game: Fruit and Veggie Scramble	10-15 Min.	3-4
Curricular Connections: Eat a Rainbow Garden	20 Min.	5
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Additionally, if you are interested in doing an *Eat a Rainbow* classroom challenge to encourage your students to eat a variety of fruits and vegetables, see the chart at the end of this packet which students can take home to complete with their families, and bring back to you at the end of the week. Then, you can total up and celebrate the amount of fruits and vegetables your class ate over the week! For other *Eat a Rainbow* lesson and activity ideas, see <http://www.chathamnc.org/index.aspx?page=1463>. To keep up to date on *Eat a Rainbow* activities throughout the community and get tips and recipes for eating your fruits and vegetables, keep an eye on our Eat a Rainbow Week blog at www.chathampublichealth.com/eat-a-rainbow.

If you are interested in having a Public Health Educator or Nutritionist from the Chatham County Public Health Department complement your instruction by presenting to your class about nutrition, please take a look at the offerings for your grade level at www.chathamnc.org/schoolhealth, or contact Ellie Morris, the School Health Liaison for the Chatham County Public Health Department at elizabeth.morris@chathamnc.org or 919-545-8443

The key points to focus on this month are:

- **Eating a bunch of different colored fruits and vegetables will help you get the different nutrients your body needs!** To get all the health benefitting super powers that fruits and veggies have to offer, you need to *eat a rainbow* regularly.
- **Trying new colorful fruits and vegetables is a fun, tasty adventure!** You’ll never get tired of fruits and veggies if you eat all different kinds and all different colors and if you keep on trying new ones you’ve never tried.
- **Fill half your plate with fruits and vegetables at every meal!** The only way you can eat all the colors of the rainbow each day is if you eat at least one fruit or vegetable at every meal! Fruits and vegetables make great snacks too- try apples wedges, carrots sticks, grapes, or raisins.

Fruit and Vegetable Basics

Eat a rainbow every day to get all of health benefitting super powers (a.k.a nutrients) that different fruits and vegetables have to offer! See below for some of the nutritional benefits provided by a colorful diet. For more information, see http://www.fruitsandveggiesmorematters.org/?page_id=53.

- The red group** – Many red fruits and vegetables are great sources of Vitamin C which helps keep the gums stay healthy and helps the skin heal from cuts and scrapes. Red fruits and vegetables that contain 20% of the recommended daily value of Vitamin C per serving include: red bell peppers, raspberries, watermelon, tomato, guava, grapefruit (pink!), and strawberries. Red fruit and vegetables also contain lycopene and anthocyanins. Research is being done to determine if these phytochemicals have a role to play in cancer prevention and treatment. (http://www.mayoclinic.com/health/lycopene/NS_patient-lycopene, <http://en.wikipedia.org/wiki/Anthocyanin>, http://www.fruitsandveggiesmorematters.org/?page_id=53)
- The orange/yellow group** – Many orange and yellow fruits and vegetables provide the body with Vitamin A which helps keep the eyes and skin healthy and helps protect the body from infections. Even though oranges are orange in color, they actually don't provide Vitamin A (but they do provide a lot of vitamin C!). Crunchy orange vegetables like carrots and sweet potatoes are packed with Vitamin A. They contain 20% of the recommended daily value per serving, along with fruits like cantaloupe, apricot, mango, and grapefruit. (http://www.fruitsandveggiesmorematters.org/?page_id=53)
- The green group** – Dark green vegetables like collard greens and spinach contain calcium for strong bones. And as we know from Popeye, spinach also contains iron to feed the blood and keep us feeling energized and strong. Many green vegetables also contain high levels of folate, which may reduce a woman's risk of having a baby with certain birth defects and may reduce the risk of certain cardiovascular diseases. For folate, eat broccoli, collard greens, spinach, lima beans, brussels sprouts, lettuce and artichokes. (http://www.fruitsandveggiesmorematters.org/?page_id=53, <http://www.extension.iastate.edu/Publications/N3401.pdf>)
- The blue/purple group** – Similar to red fruits and vegetables, purple fruits and vegetables also contain anthocyanins which may have a role to play in preventing and treating cancer. Additionally, blueberries may increase memory function in older adults. Although less of the common fruits and vegetables that we eat are blue and purple (compared to other color groups), increasingly you can find purple varieties of vegetables like string beans, broccoli, and carrots at farmers markets. (<http://www.webmd.com/alzheimers/news/20100121/blueberry-juice-may-boost-memory>)

How many servings of fruits and vegetables should I eat every day?

The USDA Nutrition Guidelines recommends eating the following amounts of fruits and vegetables each day. Amounts vary based on age, sex, and activity level. (<http://www.choosemyplate.gov>)

	Kids 4-8 years	Girls (9-13) Boys (9-13)	Teen Girls (14-18) Teen Boys (14-18)	Women (19-50) Men (19-50)	Women (51+) Men (51+)
Fruits	1-1.5 cups	1.5 cups (girls) 1.5 cups (boys)	1.5 cups (girls) 2 cups (boys)	1.5-2 cups (women) 2 cups (men)	1.5 cups (women) 2 cups (men)
Vegetables	1.5 cups	2 cups (girls) 2.5 cups (boys)	2.5 (girls) 3 cups (boys)	2.5 cups (women) 3 cups (men)	2 cups (women) 2.5 cups (men)

For more information on how much to eat and how much counts as a cup, see:

For fruits - http://www.choosemyplate.gov/foodgroups/fruits_counts_table.html,

For vegetables - http://www.choosemyplate.gov/foodgroups/vegetables_counts_table.html

Educational Game	Fruit and Veggie Scramble
<i>Standard Course of Study Objectives and Health Education Essential Standards</i>	3 rd grade: <ul style="list-style-type: none"> • 4.04, 4.05 4 th grade: <ul style="list-style-type: none"> • 4.04 • 4.NPA.2.2 5 th grade: <ul style="list-style-type: none"> • 4.01 • 5.NPA.2.2
<i>Time needed</i>	10-15 minutes
<i>Organization/ Equipment</i>	Organization: <ul style="list-style-type: none"> • Students should be grouped into small teams (2-4 students/team) and standing where they have some room to move. Equipment: <ul style="list-style-type: none"> • Flip chart or whiteboard and a marker • List of physical activities written on the board, including: jumping jacks, marching in place, bunny hops, lunges, push-ups, sit-ups, large arm circles, jogging in place, etc.
<i>Teacher Introduction</i>	This activity includes a brief review of fruit and veggie basics and then engages students in an active fruit and veggie trivia game. Students will have a chance to get some physical activity in addition to learning about healthy eating.
<i>Rules and Directions</i>	<ul style="list-style-type: none"> • Let the students know that today they will be doing a short brainstorm and then going into a fun game about fruits and veggies. • Engage the students in a brief brainstorm about all of the things they know about fruits and vegetables and why they are good to eat. Be sure to cover how many to eat per day, nutritional benefits, why it's good to eat a variety, etc. • As students give responses, write them down on a flip chart or your board, and correct any misconceptions. • Tell students to take a moment to look at the answers on the flip chart/board and remember the discussion they just had because they will need to remember this information for the game they are going to play. Give students 30 seconds to a minute to look. • Once the time is up, split the students into teams and tell them to stay close to their teammates so they can communicate during the game. • Let them know that you'll be reading a series of statements about fruits and veggies. The answers to all of these statements might not have been covered in the brainstorm, but you know they are really knowledgeable about healthy eating! • The teams will have to "agree" or "disagree" with each statement. • Once you finish reading each statement, teams need to huddle quickly to decide whether they disagree or agree with the statement – they'll only have 10-20 seconds to decide if they agree or disagree. • As soon as the team decides on their answer, the <i>whole team</i> will have to do an action. Agree= jump up and down. Disagree = squat. • Tell students that while you are reading the statements, they will also have different actions to do. Refer to the list on the board. You can have all teams do the same activity and just rotate through the list (for question one they all do jumping jacks, for question 2

they all do marching in place, etc.) or you can assign different activities to different teams.

- Ask if the students have any questions about how the game works, than review, “What motion do you do if your team agrees with the statement? (Yes, jump up and down.) What about when your team disagrees? (Right, squat.)
- As you play the game, clarify any misconceptions that arise as students answer the statements, or expand on students’ answers to introduce new content or ideas.

List of questions to ask (correct answer in parentheses):

- It is recommended that you eat 1 cup of vegetables and ½ cup of fruit each day. (Disagree- 2 - 2.5 cups of vegetables and 1.5 - 2 cups of fruit per day are recommended.)
- Fruits and vegetables contain vitamins and minerals which your body needs. (Agree)
- Eating crunchy orange vegetables like carrots helps to keep your eyes strong. (Agree)
- Thinking about “eating a rainbow” helps us remember to eat a variety of fruits and vegetables each day. (Agree)
- Breakfast should not contain fruits or vegetables. (Disagree, explain that a breakfast that contains some sort of protein as well as a fruit or vegetable will help give them energy and focus to start the school day.)
- Fruits and vegetables contain a lot of fat and sugar which is bad for the heart and can make you gain weight. (Disagree)
- Strawberries and other red fruits and vegetables contain Vitamin C, which helps your skin heal from cuts and scrapes. (Agree)
- It’s enough to just eat one fruit or vegetable each day. (Disagree, it’s good to eat a variety of colorful fruits and vegetables each day, and you should eat around 2 cups of vegetables and 1.5 cups of fruit each day)
- Blackberries, blueberries and eggplant are all part of the same color group. (Agree)
- Eating fruits and vegetables from each of the 5 color groups and being active will you’re your heart stay healthy and keep you feeling good. (Agree)
- My team knows of a great fruit or vegetable snack! (When teams agree, ask what that snack is.)
- When you want a sweet treat, fruit is a great choice. (Agree. Fruit has some natural sugar, but not as much as cake or ice cream, and a little bit of sugar is okay every day.)
- I should eat at least one fruit and vegetable with every meal. (Agree...and for snacks too!)
- Many dark green vegetables contain calcium which is good for your skin. (Disagree, good for your bones)
- Eating a variety of fruits and vegetables might help prevent many different kinds of illnesses, including heart disease and some cancers. (Agree)

Debrief – for each question get a few different students’ answers:

- What was the takeaway message?
- What are a few things you might be able to do in your own life to eat more of the rainbow each day?

*Note: Feel free to keep score or not in this trivia game – whatever matches your normal routine!

*Adapted from “Fruit and Veggie Lesson Plans for Grades K-5”:

<http://www.nutritionnc.com/ResourcesForSchools/index.htm>

Curricular Connections	<i>Eat a Rainbow Garden</i>
<i>Standard Course of Study Objectives and Health Education Essential Standards</i>	3 rd grade: <ul style="list-style-type: none"> • 4.04, 4.05 • 3.NPA.1.1, 2.1 4 th grade: <ul style="list-style-type: none"> • 4.04 • 4.NPA.2.2 5 th grade: <ul style="list-style-type: none"> • 4.01 • 5.NPA.1.1
<i>Time Needed</i>	20 minutes
<i>Organization/ Equipment</i>	Organization: <ul style="list-style-type: none"> • Students will work in pairs or individually on their gardens and worksheets. Or do the garden design and/or the worksheet part of the lesson as a class. Equipment: <ul style="list-style-type: none"> • For each individual or pair: paper, pencil, ruler, and crayons, colored pencils or markers
<i>Teacher Introduction</i>	Students will practice geometry, measurement, fractions, and computational skills by applying these skills to designing a garden full of their favorite colorful fruits and vegetables.
<i>Rules and Directions</i>	<p>Tell students that today they are going to design an Eat a Rainbow garden. Ask students if any of them have ever gardened and what they liked about it, or if your school has one, make a connection to students' experiences with the school's garden. Ask students what gardens can contribute to good nutrition and physical activity.</p> <p>To begin the activity, tell students to start by drawing a rectangle that is 10 inches by 8 inches. Then, direct students to the following guidelines and tell them that they can choose to plant whatever fruits and vegetables they like within these guidelines. To "plant" they will write the name and draw the fruit/vegetable with the appropriate color, or they can cut photos out of magazines and make a collage.</p> <p>Garden Design Guidelines:</p> <ul style="list-style-type: none"> • The garden will be split into equal sections. Each section will be a rectangle with one side measuring 8 inches. • Three fifths (3/5) of the garden should be planted with vegetables. The remainder should be planted with fruits. • One fifth of the garden should be planted with trees. (Ask: What fruit or vegetable do you know that grows on a tree?) • Each of the color groups should be represented in one of the sections. <p>Once students are finished designing their gardens, ask them to complete the Eat a Rainbow Garden worksheet (below) in pairs (or as a class), and debrief students' answers as a class.</p> <p>*Lesson inspired by "Fractions in the Garden" from the Fruit and Veggie Lesson Plans for Grades K-5 http://www.nutritionnc.com/ResourcesForSchools/pdf/fvLessons/grade5.pdf</p>

Eat a Rainbow Garden

For this garden, each inch on your paper stands for two feet on the ground. Calculate the total area in feet of fruits you planted _____ and the total area of vegetables _____.

If each tree in your tree patch needs a square of space with an area of 16 feet in order to grow and succeed, how many trees could you plant in this patch? _____

If you removed two thirds ($\frac{2}{3}$) of the space you had planted in vegetables, what would the new area of the garden be (in feet)? _____ What fractional part of the garden would be left? _____

Write how you would prepare and enjoy the fruits and/or vegetables in your garden for...

- a healthy breakfast:

- a healthy lunch:

- a healthy snack:

- a healthy dinner: