Welcome
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fittolearn.org
Welcome to Fit to Learn!

Thank you for choosing to participate in Fit to Learn, an innovative professional development program from Healthy Schools Campaign.

Research confirms what teachers know: Healthy, active and well-nourished students are better prepared to learn. The school environment—from the air students breathe to the food they eat, the opportunities they have to be active and the habits they develop—will shape their health and lifelong learning. Initiatives to improve student wellness offer an opportunity to prepare students for increased academic achievement and reduced absenteeism. Studies show that when kids are physically active and have a healthy school environment, learning and test scores improve.

Teachers play a key role in promoting student wellness as they spend significant time with students and serve as critical role models. Teachers’ own approach to wellness makes a big impression on children.

For this reason, Healthy Schools Campaign created Fit to Learn, a professional development program focused on practical approaches to making health and wellness a regular part of the classroom experience. The program highlights ways to fit healthy habits into daily learning, integrating nutrition education and fitness into classroom lessons that meet standards in math, reading, science, social studies, art and music.

The session you’re about to begin will prepare you to integrate nutrition and fitness behaviors into the lessons you teach every day, regardless of the subject you teach. The objective of Fit to Learn is to make healthy habits a routine part of how kids learn. It’s an exciting new approach to teaching familiar subjects, and we’re honored that you’ve chosen to be part of it.

In addition to the new ideas you’ll bring to your students as a result of this program, we also want Fit to Learn to provide value to you as an educator. As a participant, you’ll be eligible for Clock Hours (formerly CPDUs). Fit to Learn will prepare you to lead and share best practices with other teachers and school staff, giving you a tangible leadership opportunity within your school and the ability to bring healthy habits to even more students.

The Fit to Learn curriculum was created with the goal of striking a balance between inspirational ideas and practical approaches that work within the realities of everyday teaching. We hope you find it informative and creative—and that you leave the sessions inspired to put your students on the path to healthy lifelong behaviors.

Thank you again for being part of Fit to Learn!

Sincerely,

Kristi Cox, Training + Program Manager
Healthy Schools Campaign

Photo/Video Release

Fit to Learn will be documented through photography and videography. By attending this event, you release to Healthy Schools Campaign (HSC) and its partners and sponsors the rights to any photographs and/or video in which you may appear. If you do not agree to this release, please notify HSC event staff.
Agenda

8:30 a.m.  
Registration and Breakfast

9:00 a.m.  
Welcome and Icebreaker  
Kristi Cox and Rosa Ramirez Richter, Healthy Schools Campaign

9:15 a.m.  
About Fit to Learn  
Kristi Cox, Healthy Schools Campaign

9:25 a.m.  
The Connection Between Health and Academic Success  
Rosa Ramirez Richter, Healthy Schools Campaign

10:00 a.m.  
The Benefits of Garden-Based Learning  
Drew Thomas, Chicago Public Schools

11:15 a.m.  
Making Healthy Habits Part of Daily Learning  
Stephanie Folkens, Common Threads

12:00 p.m.  
Lunch

1:00 p.m.  
Strategies for Integrating Nutrition Education into the Classroom  
Kristi Cox and Rosa Ramirez Richter, Healthy Schools Campaign

1:40 p.m.  
Boosting Student Learning with Physical Activity  
Kristi Cox, Healthy Schools Campaign

1:50 p.m.  
Strategies for Integrating Physical Activity into the Classroom  
Abby Rose, Consultant

2:45 p.m.  
Closing Remarks  
Kristi Cox and Rosa Ramirez Richter, Healthy Schools Campaign

2:50 p.m.  
Evaluations

3:00 p.m.  
Adjourn
Facilitator Bios

**Kristi Cox**
Training + Program Manager, Healthy Schools Campaign
kristi@healthyschoolscampaign.org · 312-419-1810

Kristi started her journey into the realm of healthy food by conducting research about her son’s ADHD. Much of the information she found linked food as a contributor to this condition, which increased her interest in food-related issues. As a parent and working mom, her need to implement change went further than making changes at home; she began working to change careers to be directly involved in helping others understand the importance of healthy eating. After nine years as a professional makeup artist and corporate trainer, she began volunteering for Healthy Schools Campaign where she eventually took on a full-time position. Kristi is excited to grow, learn and develop her abilities in the nonprofit community.

**Stephanie Folkens**
Curriculum and Quality Assurance Manager, Common Threads
sfolkens@commonthreads.org

Prior to joining CT staff, Stephanie worked as a middle school math teacher in Houston. During her time as a teacher, she started an after-school cooking program and decided to transition into teaching students how to cook. Stephanie enrolled in the culinary arts associate program at Kendall College and began volunteering in Common Thread classes. After earning an associate degree in culinary arts, Stephanie joined the CT staff in 2011. She has held various roles at the organization, but currently works as the Curriculum and Quality Assurance Manager and oversees all the writing, designing, and accompanying training for all of CT’s curriculum.

**Rosa Ramirez Richter**
Director of Chicago Programs + Policy, Healthy Schools Campaign
rosa@healthyschoolscampaign.org · 312-419-1810

Rosa works with a wide range of school leaders, community members, nonprofits, public agencies and community organizations. She helps schools create healthy environments where wellness, healthy eating, physical activity and nutrition education are priorities. She holds a master of science degree in community development from the University of California at Davis and a bachelor’s degree in public policy and sociology from DePaul University.
Abby Rose
Early Childhood Program Manager, CATCH Global Foundation
arose@catchglobalfoundation.org

Abby Rose joined CATCH Global Foundation in 2016 as the Early Childhood Program Manager. She will be responsible for developing and disseminating CATCH’s early childhood nutrition education, physical activity and sun safety programs. In addition to her work at CATCH, Abby is a national trainer for SHAPE America’s Let’s Move Active Schools Physical Activity Leadership initiative as well as a member of the SHAPE America Physical Activity Council. Until recently, Abby was a School Wellness Specialist in the Office of Student Health and Wellness (OSHW) of Chicago Public Schools (CPS). Her main areas of focus were Comprehensive School Physical Activity Programming (CSPAP) and early childhood wellness. Before joining CPS, Abby was the founding PE teacher and Director of Health and Wellness at Namaste Charter School, a national model of school wellness as a vehicle for student success on the southwest side of Chicago.

Drew Thomas
School Garden Coordinator, Nutrition Support Services, Office of Student Health and Wellness (OSHW), Chicago Public Schools
dmthomas21@cps.edu

Drew Thomas’ passion for good food grew from a lifelong concern for ecological sustainability. Drew is the school garden coordinator for Chicago Public Schools, where he provides technical assistance to school gardeners; connects schools to garden resources; and oversees the implementation of a school garden food safety program, Eat What You Grow, which allows garden produce to be served in the school’s dining center. He came to these roles after a meandering path that included working as an advocate for environmental protections at local, federal and international levels, work on a small organic farm, teaching courses on Urban Agriculture at Northeastern Illinois University, researching urban food production as a graduate student at the University of Chicago, and extensive culinary-themed travels.
About Fit to Learn
Program Description

Healthy Schools Campaign is pleased to present Fit to Learn as a free professional development program that provides teachers with time-tested tools and techniques to help motivate and empower them to integrate physical activity and nutrition education into their classrooms and to be health and wellness leaders in their schools.

Program Goal
Fit to Learn aims to help teachers integrate nutrition and fitness into everyday classroom subjects, while meeting state standards.

Program Objectives
1. Implementation: Model healthy behavior and integrate healthy habits into daily learning through nutrition education and physical activity.
2. Cultivation: Promote and share wellness ideas not only within your own classroom but with fellow staff members. Cultivate a culture of wellness at your school by creating and implementing health-promoting lesson plans, school policies and programs. Be a leader for wellness!
3. Recognition: Recognize the efforts of others to integrate healthier foods and fitness into school culture and activities.

You will learn effective strategies for:
- Integrating physical activity, nutrition education and healthful practices into your classroom
- Managing your classroom while promoting healthy lifestyles
- Creating a healthy classroom, including ideas for birthday celebrations, parties and fundraisers
- Modeling healthy behavior and staff wellness
- Engaging and sharing best practices with others

You will receive:
- Easy-to-implement lesson plans for grades K-2 and 3-5
- Training by HSC staff and other wellness experts
- Clock Hours (formerly CPDUs) for participation
- Free resources, including posters, non-food rewards, a binder of materials and more

Session topics include:
- Overview of obesity’s effects on learning
- Connection between health and academic achievement
- Lesson plans for integrating health messages into science, math, social studies, reading, art and music
- Food in the classroom, including healthy rewards, fundraising, snacks and parties
- Creating healthy school environments by involving principals, staff, parents and students
- Strategies for engaging and sharing best practices with others

Participant expectations:
- Attend the full-day Fit to Learn session and choose one elective (two-hour session) throughout the year
- Practice/start implementing healthy learning in your classroom
(continued)
Program Description

· Be a wellness leader! Share wellness messages and ideas with other teachers in your school
· Work with your principal, other teachers, parents and students to create a healthy school environment
· Participate in HSC program evaluation
· Read all materials

For more information, please visit fittolearn.org or contact Kristi Cox at 312-419-1810 or kristi@healthyschoolscampaign.org.
Fit to Learn Milestone Checklist

Teachers should strive to continue to participate in Fit to Learn boosters or approved PD opportunities around health and wellness.

Each teacher should attend the full-day Fit to Learn session, participate in the booster sessions, practice and share health and wellness ideas with other teachers and participate in the program evaluation.

**September - December 2017**

**Professional Development**
- Attend a Fit to Learn booster or Fit to Learn-approved professional development opportunity

**Personal Wellness**
- Set a personal wellness goal (i.e. improve your diet, increase physical activity, reduce stress)

**Create a Healthy Classroom**
- Establish a protocol for healthy celebrations and rewards inside your classroom
- Communicate with parents/guardians about your expectations regarding classroom wellness (i.e. letter home, email, phone call)
- Try out Fit to Learn lessons in your classroom
- Integrate daily nutrition education in one subject area such as counting calories in math, offering a healthy tip of the day, connecting food systems to social studies.
- Integrate movement daily in one subject area such as active math problems, active spelling, active story problems.
- Team up with an outside organization to help deliver more programming around nutrition education and physical activity (i.e. OrganWise Guys, Urban Initiatives, Girls in the Game)

**Create a Healthy School Culture**
- Join or start a School Wellness Team
- Have your school offer healthy food at all staff meetings
- Present Fit to Learn ideas and strategies at a staff meeting or professional development day
- Discuss Fit to Learn ideas one-on-one with other teachers
- Email healthy ideas and messages to colleagues
- Provide information to parents via newsletter, phone calls, email and handouts
- Participate in the Fit to Learn Facebook community

Continued on the next page
Fit to Learn® is a program of Healthy Schools Campaign

Fit to Learn Milestone Checklist

January - March 2018

Professional Development
- Attend a Fit to Learn booster session or Fit to Learn-approved professional development opportunity

Personal Wellness
- Continue working toward your goals for food and fitness
- Encourage close friends or family members to join your efforts

Creating a Healthy Classroom
- Develop your own lesson plans with physical activities
- Develop your own lesson plans with nutrition education
- Develop your own lesson plans with an outdoor/garden component
- Continue to offer physical activity breaks throughout the school day
- Continue integrating nutrition education into the daily curriculum

April 2018

Creating a Healthy School Culture
- Encourage a colleague to register for Fit to Learn 2018

Creating a Healthy School Culture
- Consider organizing a health fair in your school, inviting teachers, parents and Network Area Officers
Additional Information

Clock Hours
Formerly known as CPDUs, Clock Hours are offered to teachers who participate in various professional development trainings such as Fit to Learn. Healthy Schools Campaign will offer Clock Hours to teachers who participate in Fit to Learn trainings, including booster sessions and webinars offered over the course of the school year.

Chicago teachers will not be required to report their hours through The Learning Hub; Questions on reporting Clock Hours should be directed to The Learning Hub Help Desk at 773-553-3HUB or via email at learninghub@cps.edu.

Facebook
Join our Facebook group! This is a great way to learn about upcoming trainings and events, special promotional offers and to connect with other Fit to Learn teachers. Join us at facebook.com/groups/fittolearn.

Online Resources
We’ve put together a comprehensive list of online resources to support efforts in nutrition education, school gardens, creating a culture of wellness, movement in the classroom, physical education, recess, chronic absenteeism, and staff health and wellness. You can access this list at healthyschoolscampaign.org/f2l-online-resources.

Grant Calendar
We’ve put together a list of grants that you can apply for that provide funds for a range of projects and programs. You can access this calendar at healthyschoolscampaign.org/grant-calendar.

Fit to Learn + Wellness Policy Requirements
We’ve designed Fit to Learn specifically to help teachers achieve the physical activity and nutrition education requirements put in place by CPS. Fit to Learn uses simple strategies to incorporate physical movement into various classroom lesson plans or through five-minute “brain breaks.” Fit to Learn also offers nutrition-based lesson plans, booster sessions devoted to nutrition education and connects Chicago teachers with free or reduced cost program providers that can help teachers meet their school’s nutrition education goals.

Per the district’s wellness policy, principals are required to appoint a staff wellness champion who is the leader of the school’s wellness team. The wellness champion is key not only to help the school stay on track but to also motivate and inspire the entire school team to buy into the health-promoting changes. Fit to Learn can help provide teachers with the resources and knowledge to take on this important leadership role.

You can read more about the CPS Wellness Policy in the Resources section of this binder.
Thank You

Healthy Schools Campaign would especially like to thank Remedy for its significant pro bono donation of time, resources and talent toward the development of the Fit to Learn program. Remedy is a brand strategy and communications agency with a singular focus: to make a positive difference in the health of people locally, nationally and around the world. Learn more about Remedy at remedychicago.com.

Healthy Schools Campaign would like to thank the following foundations for their generous support of this work:

Anonymous
Robert and Isabelle Bass Foundation
The Brinson Foundation
Cedar Tree Foundation
The Chicago Community Trust
Finnegan Family Foundation
The Lumpkin Family Foundation
Michael Reese Health Trust
Polk Bros. Foundation
Presence Health
The Siragusa Foundation
Stuart Family Foundation
Fit to Learn Booster Sessions

**OSHW Back to School Professional Development**
Tuesday, Aug. 22, 2017, 8 a.m.–3 p.m.
Chicago High School for Agricultural Sciences
3857 W. 111th St., Chicago, IL, 60655
Chicago Public Schools' Office of Student Health and Wellness will lead this comprehensive back-to-school professional development. This training will offer multiple breakout sessions that focus on student engagement, school gardening, physical education in non-traditional spaces, recess supervisor training, and health education and health services.

**Common Threads Cooking for Life**
October 2017
Location TBD
Common Threads will lead this free professional development for teachers. Participants will be introduced to the Small Bites program, Common Threads in-school nutrition program consisting of eight grade-level specific lessons. This two-hour workshop will focus on nutrition and healthy snack demos.

**Worm Composting in the Classroom**
February 2018
Location TBD
In this booster, you'll learn how to start, maintain and utilize a classroom worm bin, which teaches students about the important natural systems, turning food waste into fresh compact and exposes them to the wonderful world of life inside soil. This session features Drew Thomas, the school garden coordinator at Chicago Public Schools. Plus, you'll leave with starter worms, a classroom compost bin and a variety of lessons and activities to engage students!

**School Gardens 101**
March 2018
Location TBD
This introductory garden session will lay the groundwork and identify resources for getting your school garden up and running in the spring and keep in running throughout the year. This session features Drew Thomas, the school garden coordinator at Chicago Public Schools.

**Achieve the Healthy CPS Indicator**
November 2017
Webinar
Join us for an hour-long webinar designed to provide support for schools who want to achieve the Healthy CPS Indicator, the health-focused measure included on school progress reports. This webinar is great for wellness champions, members of the school wellness team and teachers. We will discuss best practices for filling out the evaluation survey, share tips for meeting wellness goals and more.
Lessons K-2
Eating a Rainbow

Making colorful food choices every day helps encourage students to eat a variety of foods that are both delicious and high in vitamins and minerals. In this lesson, students will create a beautiful wall or bulletin board that will inspire them to “Eat a Rainbow!”

SUBJECTS

NUTRITION  ART

GRADE LEVEL

K-1

TIME

1 hr
Eating a Rainbow

Objectives

· Students will be able to identify several fruits and vegetables from every color of the rainbow
· Students will identify the elements of shape, color and texture in the foods they explore
· Students will categorize the produce under the proper letter of the alphabet (posted somewhere visually) and identify, verbally and in writing, what letter corresponds with the produce
· Students will identify distinguishing features of a sentence (e.g. first word, capitalization, ending punctuation)

Materials & Preparation

· Magazines or newspapers, especially food/cooking magazines or grocery store ads
· Scissors, glue, colored markers
· 3x5 cards and colored construction paper
· Large outline of a rainbow on a bulletin board or classroom wall
· Lowercase letters written on the board or on poster paper, or done with visual media
· Paper or mini-white boards or chalkboards for students who can write the letters and words

Common Core Standards

· RF.K.1.d. Demonstrate understanding of the organization and basic features of print. Recognize and name all uppercase and lowercase letters of the alphabet.
· RL.K.10. Actively engage in group reading activities with purpose and understanding.
· RF.1.1. Demonstrate understanding of the organization and basic features of print.
· Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).
Eating a Rainbow

1. Begin with a read/think aloud of the book “I Eat a Rainbow” by Bobbie Kalman, or “Eating the Alphabet” by Lois Ehlert. Point out distinguishing features of a sentence (e.g. first word, capitalization, ending punctuation).

2. Tell students that they are going to go on a treasure hunt for pictures of colorful fruits and vegetables.

3. Give small groups of students several magazines or newspapers along with scissors, and have them cut out all the pictures of produce they can find.

4. Once students have ample time to search and have created a significant pile of images, have students stop searching and remove the magazines or newspapers and scissors.

5. Tell the students that your goal is to create a rainbow of fruits and vegetables for the bulletin board or wall. Ask students if they can guess why they are doing this. Instruct groups to sort their images by color. (Students may be thrown off by images that have more than one color; encourage them to use the color that takes up the most space in the image).

6. Compile all groups’ images into similar color piles: red, orange, yellow, green, blue/purple and white.

7. Hold up each image for the group and ask them to name the image. If possible, ask them to try to spell the name of the fruit or vegetable as well. The teacher or student will then write the name of the image on a 3x5 card in the corresponding marker color. (For example, strawberry is written in red).

8. Students will identify the lowercase letter the produce falls under and show they know by writing it on their white board. After each student has written the letter, they will say it/check it with their partner. This is also an informal observation assessment.

9. Put up an outline of a rainbow and one-by-one have students add the images and words into the rainbow in the corresponding spot.
Eating a Rainbow

Conclusion

10. Ask students to comment on the nature of their work. What do they think about all the beautiful fruits and vegetables? How many of them have the students tried?

11. Ask students again if they can guess why they did this lesson or what they learned.

12. Explain to students that by choosing a variety of colors in their meals every day, they are sure to get a good variety of healthy nutrients.

Assessment

- Ask the students to draw on a paper plate a meal that would include both their favorite foods and many colors.

Extensions

- Have students create their own healthy meal with their parents on the MyPlate sheet! Download online: choosemyplate.gov/print-materials-ordering.html
- Wrap up the lesson with a read-aloud from a related book. Several options include:
  - “How To Grow A Rainbow Garden” by Rosalind Creasey
  - “Alphabet Soup” edited by Barbara M. Walley
  - “Alphabet Soup” by Katherine Anne Banks
  - “Eating the Alphabet: Fruits and Vegetables from A to Z” by Lois Ehlert
It may come as a surprise, but several vegetables we eat every day are actually fruits! Fruits are defined as the ovary of a plant, which contains the seeds. Several foods we commonly call vegetables, such as peppers, tomatoes, beans, pumpkins and cucumbers are actually the fruit of a plant because they hold the seeds. True vegetables would be foods that are the stems, leaves, roots, or flowers of the plant. Generally foods that are sweet are labeled as “fruits,” and foods that are not sweet are called “vegetables.” In this lesson, challenge what your students already know to see if they can win the game of “Fruit or Not?”
Fruit or Not?

Objectives

- Students will be exposed to both familiar and new foods in a scientific way
- Students will be able to identify produce as a fruit or vegetable
- Students can compare and contrast similarities and differences between the two types of foods
- Students will categorize the vegetables and fruits and count the number of each; students may count and record the number of seeds after measuring, if time allows
- Student will organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points; identify how many fit in each category and compare groups of data; graph results (groups of students or teacher may graph)

Materials & Preparation

- Several types of fresh produce, such as strawberries, bananas, oranges, apples, kiwi, peppers, pumpkins, cucumbers, mango and peaches as well as some examples of “true” vegetables such as potatoes, carrots, beets and broccoli
- Fruits/vegetables will need to be cut in half and placed in a dish for each team of two students
- Keep paper towels or wipes handy for clean up
- Separate dishes for collecting the seeds
- Measuring tools such as rulers or scales

Common Core Standards

- 1.MD.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less in one compared to the other.
- RL.1.1. Ask and answer questions about key details in a text.
- K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.
- K.MD.2 Directly compare two objects with a measureable attribute in common to see which object has more or less of the attribute and describe the difference.
- RL.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text
Fruit or Not?

STEM Alignment

- Analyzing and computational thinking
- Reason abstractly and quantitatively
- Construct explanations and design solutions.
- Obtaining, evaluating, and communicating information

Lesson Introduction

1. Begin a discussion about what makes a fruit a fruit. Student responses might include that it's sweet, it's healthy, it grows on a tree, it has a stem, it comes from a seed, etc. Have students imagine all the fruits they've ever eaten before. What other things do they have in common? Read excerpt from a non-fiction book that discusses this.

2. Challenge students to the “Fruit or Not?” competition. Show pictures or list a large variety of fruits and vegetables and have the class make a prediction about whether or not the picture or word is a fruit. Have a student keep track of everyone’s answers on the board.

3. If not already mentioned, introduce the idea that a fruit has seeds. Explain to students that they will be working in pairs to investigate if a type of produce is a fruit or not.

Body of Lesson

4. Pair students at a table across from a partner. If worried about potential messes, tables can be covered in newspaper first.

5. Give each pair a bowl/plate with one type of produce. Challenge students to discover if the produce is a fruit or not. If so, suggest that they collect and count the seeds. This exploration should take several minutes.

6. Once students have used the evidence in front of them to decide if their produce is a fruit or vegetable, discard or compost the produce and save the seeds. Have students clean up their workstations and return to the group discussion area.
Fruit or Not?

Conclusion

7. Go through the produce one-by-one and compare with what the students found compared to their initial predictions. Was their prediction correct? Why or why not?

8. An option would be to conclude the lesson and discussion with the book “A Fruit Is a Suitcase for Seeds” by Jean Richards.

Assessment

· As an assessment, quiz the students during meal or snack times about the food on their plate. Is this (carrot) a fruit or not?

Extensions

· First grade: Count and measure the seeds (either size or weight) and make a graph comparing the number and sizes of seeds in different fruits. Why might the seeds be so big or so small? Why might there be so many of them? Which is the only fruit we explored that has seeds on the outside? (Answer: Strawberry)

· Organize, represent, and interpret data by asking and answering questions about the total number of data points of fruits and veggies, how many in each category, and how many more or less are in one compared to the other.

· If there are materials and space available, have students plant the seeds (an egg carton is a great seed starter) and see what the sprouts look like. Do tiny seeds produce tiny plants? Do large seeds produce large plants? Compare and contrast.

· Guided reading, read aloud, home, or classroom library suggestions:
  · “I’m a Seed” (Hello Reader) by Jean Marzollo
  · “How and Why Seeds Travel” (How and Why Series) by Elaine Pascoe
After completing the lesson “Fruit or Not?” (page 23) students will have been introduced to one of the six edible parts of plants. This lesson will build on that understanding as students explore the other five parts and their specific functions.

SUPPLEMENTARY LESSON: EXTENSION OF FRUIT OR NOT?

Classifying the Edible Parts of Plants

After completing the lesson “Fruit or Not?” (page 23) students will have been introduced to one of the six edible parts of plants. This lesson will build on that understanding as students explore the other five parts and their specific functions.

SUBJECTS

- SCIENCE
- NUTRITION
- LANGUAGE
- ARTS

GRADE LEVEL

3-5

TIME

Day 1: 30 min    Day 2: 1½ hrs
Classifying the Edible Parts of Plants

Students will first learn about basic plant anatomy and learn a song. Then, they will visit four different hands-on stations set up around the classroom to further investigate the edible plant parts. Students will be split up into small groups (4-6 per group) and travel from station to station together. It may be helpful to have a teacher’s aide or parent help facilitate the students at the different stations.

Note: This lesson is broken up into two days. Day one is “Plant Anatomy and Nutrition” and day two is the “Edible Station” activity. While flowers are one of the five remaining edible parts of a plant, they are not included as a separate station in this lesson. A thorough investigation requires more time than a station activity can allow. Flowers are explored in greater detail in a following lesson.

Objectives

- Students will know the six edible parts of plants and their functions
- Students will gain exposure to possibly new vegetables and fruits
- Students will explain the vitamins and minerals commonly found in different foods

Day 1
Materials & Preparation

- Labeled diagram of a typical plant with six main parts labeled, for reference
- Song sheets of the song “Roots, Stems, and Leaves”

Day 2
Materials & Preparation

- Station 1
  - Bunches of various greens (the leaves) cut into taste-size bites: examples include mustard, collards, lettuce, Swiss chard. If your school has a garden with some of these, take your class outside to harvest and wash the greens.
  - Station 2
  - Edible stems cut into taste-size bites: examples include celery stalks, a can of bamboo shoots and asparagus.
  - Celery stalks set aside (not for eating, one for each group)
  - Hand lenses (one for each student at the station)
  - Glass filled with water (one for each group)
  - Food coloring
Classifying the Edible Parts of Plants

- Station 3
  - Edible roots samples cut into taste-size bites: examples include carrots, radishes, turnips, beets, sweet potatoes and parsnips
  - Whole edible roots set aside (not for eating, one for each group)
  - Picture of a whole tomato plant with root system, labeled fibrous roots
  - Picture of a whole potato plant, labeled tuberous roots
  - Picture of a whole onion plant, labeled adventitious roots
  - For an optional extension activity on root sprouting: shallow dish with water, one for each group

- Station 4
  - Variety of seeds: for example, various vegetable seeds, sunflower seeds, dried beans
  - Dry lima beans or kidney beans, soaked overnight (two per student; one for dissection and one for sprouting)
  - Hand lenses (one for each student at the station)
  - Labeled diagram of a dissected lima bean
  - Pair of tweezers
  - For an optional extension activity on seed germination:
    - Petri Dishes (one for each group)
    - A few paper towels
    - Index cards (one for each group)

- Station Preparation:
  - Write up station instruction sheets for students, one per student,
  - Create a Student Observation Log, one per student, or have students record in their journals.
  - Set up the stations the day before the activity. You might need to move desks or tables to create the four separate stations around the room and label them “Station 1: Leaves”, “Station 2: Stems”, etc.
Classifying the Edible Parts of Plants

Common Core Standards

- SL.3.1., 4.1, 5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade appropriate topics and texts, building on others’ ideas and expressing their own clearly.

- W.3.2., 4.2, 5.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- 3.MD.3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories.

Day 1
Lesson Introduction

1. Explain to students that they are now going to learn about the different edible parts of plants. If your class has completed the “Fruit or Not?” lesson, connect this lesson to it.

Day 1
Body of Lesson

2. Walk through the edible plant parts (roots, stems, leaves, flowers, fruits, seeds) and their functions with students. Draw a labeled picture of a plant on the board (students can copy this in their journals and color later or for homework).

- Have a class discussion about the functions of each part on the blackboard. For example, lead with questions like: What do these parts do for the plant? How do plants capture sunlight? How do nutrients travel in plants? Can a stem be big (like a tree trunk)?

3. Explain to students that some of the six types of edible plant parts tend to be especially rich in nutrients. For example, leafy green vegetables are high in vitamins A and C, iron, and potassium. Seeds like pumpkin seeds, sunflower seeds and beans tend to be high in protein and other nutrients.

4. To further students’ understanding of the parts and the different functions, you can teach the song, “Roots, Stems, and Leaves” by the Banana Slug String Band. (See following page).
Classifying the Edible Parts of Plants

Day 1
Lesson Introduction

1. Explain to students that they will be traveling around to the different stations around the room and exploring four of the six plant parts in greater detail. Stations should take about 20-25 minutes each. Remind them to read station instructions carefully.

Day 2
Body of Lesson

2. Station 1: Leaves
   · Give each student a taste-size portion of each type of leaf. On their Observation worksheet or journal, ask them to write down their observations about each leaf (color, shape, texture, smell, and finally taste).
   · Have them make a hypothesis about which leaf will be the class favorite and write it down.
   · Once each student has tried each leaf, have them tally their small groups’ favorites. After the activity, the class will combine the tallies to come up with a class favorite and make a bar graph describing the class results.

3. Station 2: Stems
   · Give each student a plate with each type of stem. On their Observation worksheet or journal, ask them to write down their observations about each leaf (color, shape, texture, smell, and finally taste).
   · Have each student cut or break open the celery stalk and observe the stringy tubes that carry water and liquids to the rest of the plant. Use magnifying lenses for close observation. Have students draw what they see.
   · Next have each group of students decide on a food coloring to add to their glass of water, and place celery stalk in it. Have students write down their hypotheses about what will happen when they check on their celery tomorrow.

4. Station 3: Roots
   · Give each student a plate with each type of edible root. A whole edible root should also be on the table for study. On their Observation worksheet or journal, ask them to write down their observations about the whole edible root and each root sample (color, shape, texture, smell, and finally taste).
Classifying the Edible Parts of Plants

· Ask them to compare and contrast the root on the table (a taproot) with the pictures of other types of roots on the table:
  · Fibrous roots - picture of tomato plant
  · Adventitious roots - roots that grow directly from stems, leaves, branches, or bulb
  · Tuberous roots - roots that have starch and sugar storage units at the end

· Optional extension: For each group, help them cut off the top portion of their root, leaving about ½ inch of vegetable. Place the top portion in a shallow dish of water until it begins to sprout. Have student measure the sprouts’ growth daily.

5. Station 4: Seeds

· Give each student a plate with a lima/kidney bean that had been previously soaking.

· Ask students to carefully remove the seed coat with tweezers and draw and identify the seed parts based on the provided diagram: seed coat, embryo and cotyledons. Ask them to make educated guesses about the functions of each part.

· Optional extension: Next, have students germinate or sprout the additional soaked lima/kidney beans. For each group, one student will need to cut out a circular piece of paper towel to line the bottom of the petri dish with. This will be the germination chamber. Another student should dampen the paper towel with water. Students should place the lima beans on the paper towels and distribute their seeds on it. Mark on the index card, which seed belongs to which student. Place petri dish by window and regularly observe and note growth over the week. Students can draw stages of germination, and after a week or two, plant them in soil to observe development of the plant.
Classifying the Edible Parts of Plants

Conclusion

Come back together as a class and share:

1. Combine tallies of leaves and have students complete a bar graph of results.
2. Discuss hypotheses about the celery and food coloring.
3. Review different root structures and hypotheses about the root sprouting activity if completed.
4. Review different parts of the seed and hypotheses about the seed germination activity if completed.
Classifying the Edible Parts of Plants

“Roots, Stems, and Leaves”

by the Banana Slug String Band

Chorus:
Roots, stems, leaves, flowers, fruits and seeds
Roots, stems, leaves, flowers, fruits and seeds
Roots, stems, leaves, flowers, fruits and seeds
Roots, stems, leaves, flowers, fruits and seeds
That’s six parts, six parts, six plant parts that people need.

The roots hold the plant in the ground
They gather up the water that falls around
And there’s a root inside of me
Because a carrot is a root that I eat
That’s six parts, six parts, six plant parts that people need

A stem is an elevator growing up from the ground
The water goes up and the sugar back down
And there’s a stem inside of me
Because celery is a stem that I eat

The leaves are the kitchens where the food is done
They breathe the air and catch rays from the sun
And there’s a leaf inside of me
Because lettuce is a leaf that I eat

Chorus
The flowers are dressed so colorfully
They hold the pollen and attract the bees
And there’s a flower inside of me
Because cauliflower is a flower I eat

The fruit gets ripe, then falls on down
It hold the seeds and feeds the ground
And there’s a fruit inside of me
Because an apple is a fruit that I eat

Chorus
The seeds get buried in the earth
And the cycle starts again with a new plant’s birth
And there’s seed inside of me
Because sunflower is a seed that I eat

Now you know what this whole world needs
It’s roots, stems, leaves, flowers, fruits and seeds
There’s six plant parts inside of me
Because a garden salad is what I eat
Young Yogis

Yoga is a great tool to use in the elementary classroom. Yoga can energize, refocus, redirect or relax students. It can be done with both limited time and space in the classroom. In this lesson, the teacher will introduce basic yoga to students through a read-aloud, and then have students practice movements described in the book as a group. Additional poses can be added depending on students’ interests and creativity.

SUBJECTS

PHYSICAL ACTIVITY

GRADE LEVEL

K-2

TIME

30 min
**Young Yogis**

**Objectives**
- Students will be able to mimic yoga poses mentioned throughout the book
- Students will participate in creative movement as a group
- Students will be introduced to various professions throughout the story
- Students will respond to reading verbally and through writing

**Materials & Preparation**
- The book "My Daddy Is a Pretzel" by Baron Baptiste
- Create space in the room for a read-aloud accompanied by creative movement

**Common Core Standards**
- K.R.FS.1.b. Recognize that spoken words are represented in written language by specific sequences of letters.
- K.R.L.1. Actively engage in group reading activities with purpose and understanding.
- K.W.1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or name of the book they are writing about and state an opinion or preference about the topic or book.
- RL.1.1. Ask and answer questions about key details in a text.
- W.1.1 Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.
- W.2.1. Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section.
Young Yogis

Lesson Introduction

1. Gauge students’ prior knowledge of yoga. What is yoga? Do you know anyone who does yoga? Why would someone want to do yoga? Consider using a “KWL chart” that includes columns for Know, Want to Know and Learned.

2. Introduce the book and the author.

Body of Lesson

3. Read through the story once without stopping.

4. Now, go through the book a second time, giving an opportunity for children to try each pose after it’s described. Remind students to keep their personal space and move safely with the group.

Conclusion

5. After reading the book, ask the students which were their favorite poses to try. Which ones were the most challenging? Have students support all questions with reasoning and journaling after discussion about their experience. Make sure they state the topic or name of the book they are writing about and include an opinion or preference about the topic or book. This can be checked by partners for those who finish early or while the teacher observes/facilitates other students. Note the attention to support and closure for first and second graders in the standards.

Extension

- Add more kid-friendly poses, such as the child’s pose (students sit on knees on the floor and bend forward reaching their arms out in front of them with their foreheads touching the ground) or the starfish pose (students stand with their legs shoulder-width apart, arms straight out to their sides and heads tall). Students are especially motivated by animal poses. Encourage children to come up with their own poses to teach the group.
Some of the most important things students can be introduced to at this age are the five food groups. Knowing the five food groups will help students make balanced and healthy choices in what they eat every day. In this lesson, students will participate in a relay race to put several foods into the five food groups.

**SUBJECTS**

- PHYSICAL ACTIVITY
- NUTRITION
- SCIENCE

**GRADE LEVEL**

**K-2**

**TIME**

**45 min**
Food Group Frenzy

Objectives

· Students will work in teams to identify which foods fit into their pre-assigned food group.

Materials & Preparation

· Create a chart with five columns on the board, labeled with each of the five food groups: grains, meat/protein, dairy, vegetables, and fruits. (Keep this covered until the relay race begins.)

· Either have the students cut out pictures of foods ahead of time, or find images of several foods that can be used to play the game. Put tape on the back of each image and put images in the “food bank” to the side of the chart.

· Pre-divide the students into five groups.

· Have on hand a copy of any one of several books:
  · “The Monster Health Book: A Guide to Eating Healthy, Being Active & Feeling Great for Monsters & Kids!” by Edward Miller
  · “Eat Healthy, Feel Great” by William Sears

Common Core Standards

· RI.K.1. With prompting and support, ask and answer questions about key details in a text.

· RI.K.2. With prompting and support, identify the main topic and retell key details of a text.

· RL.1.1. Ask and answer questions about key details in a text.

· RI.2.6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

STEM Alignment

· Planning and carrying out investigations

· Obtaining, evaluating, and communicating information

· Addition of technology
Food Group Frenzy

Lesson Introduction

1. Begin by asking the students what they already know about the food groups. How many are there? What are they? Can they give examples of any foods in each group?

2. Next, do a read-aloud of one of the books mentioned above. Check for understanding during the read aloud, assessing if students understand the major differences between the groups.

Body of Lesson

3. After the read aloud, explain to students that they will be competing in a relay race to see if they can correctly identify which foods belong in each food group.

4. Assign students to one of the five groups: grains, meat/protein, dairy, vegetables, and fruits. Assign the groups to separate areas of the room.

5. Explain that when you start the game, the teams can send one person at a time to the “Food Bank” to select a food that belongs to their food group and add it to the chart. They then run back and tag the next player who will do the same, until all the items from their team have been put into the pyramid/chart.

6. The first team to correctly group their food items in the chart is the winner!

Conclusion

7. After the relay is completed, have each team create a “menu” of items in their food group. Students can each work on an individual page or create the menu as a group. The menu should showcase the best choices students can make of foods in their food group. As a whole group, students can pick items off each menu to create a healthy meal.
Food Group Frenzy

Extensions

- If there is access to a projector, computer lab, or interactive white board, play the “Blast Off” game with the students located here: fns.usda.gov/multimedia/games/blastoff/blastoff_game.html
- Students can read more than one of the books and compare and contrast the two using a Venn Diagram.
Nutritious Words

With a little creativity, a typical spelling lesson can also be an exercise in hand-eye coordination and nutrition! In this lesson, students will use new props to add “flavor” to their spelling words while moving at the same time.

SUBJECTS
- Physical Activity
- Nutrition
- Language Arts

GRADE LEVEL
2

TIME
20 min
Nutritious Words

Objectives

- Students will practice spelling the names of fruits and vegetables while engaging in physical activity

Materials & Preparation

- Beach ball with the colors of common fruits and vegetables (red, orange, yellow, green, blue/purple, and white)
- Students should have some prior knowledge of how to spell words similar to the ones in the activity

Common Core Standards

- W.2.8. Recall information from experiences or gather information from provided sources to answer a question.

Lesson Introduction

1. Explain to students that as a morning warm-up, today we will be practicing our spelling words with some physical movement.

2. Explain the rules of the game:
   - All students must stand next to their desks.
   - The teacher will throw the beach ball to a student. When the student catches the beach ball he must check to see what color his right (or left) thumb has landed on.
   - The student then needs to say a fruit or vegetable that is the same color.
   - As the student spells the word, all the students will perform a pre-selected physical movement, such as jumping jacks, as each letter is spelled. For example, if the word is “banana,” the students will do six jumping jacks, one for each letter of the word “banana.”

3. Do a practice demonstration with two responsible students, one naming the produce and doing the spelling, while the other demonstrates the required movement.
Nutritious Words

Body of Lesson

4. Begin by throwing the beach ball to a student. (Request that the students throw the ball to someone who has not had a turn yet.) If the student catches the ball and can’t come up with a fruit or vegetable, he can say “pass” and then toss it to the next student. If the student spells the word incorrectly, someone can “save” the student by spelling the word again while the first student does the movement.

5. Continue until every student has had a chance to catch the ball.

Conclusion

6. Review the words spelled, and add any new words to the word wall or list. Use the new words to write a poem, paragraph or short story about what was learned. Which words were the easiest to spell? Why were they so easy? (Did the students have lots of exposure to that fruit or vegetable?) What were the hardest words to spell? What were the hardest colors to match with examples of produce?

Extensions

- Bring in lesser-known fruits and veggies and/or ask students to bring in a fruit or vegetable (assign half to bring fruit and half veggies. Ask for a new, rare or favorite vegetable to be shared.) Let groups or pairs of students observe (using the five senses) and record what they learned about the fruit or vegetable they observed.
- Students can do many types of quizzes the same way, with a beach ball and a type of movement. Math facts such as adding and subtracting are very easy areas in which to add movement.
Taste is a complex sense that influences what we like to eat and our food choices. After completing the lesson “Nutritious Words” (page 47), this activity will help students develop a wider vocabulary and increased writing ability around food tastes. Students will also become mindful eaters, aware of the complexity of different fruits and vegetables and why they might like some more than others.

**SUBJECTS**

- NUTRITION
- LANGUAGE
- ARTS

**GRADE LEVEL**

4-5

**TIME**

45 min
Building a Food Vocabulary

Objectives

- Students will learn new adjectives and ways to describe food
- Students will write a thorough description of a food and convey important details to their audience

Materials & Preparation

- Flavor Pyramid handout (provided)
- Prepare a Flavor Observation worksheet or have students record in their journals
- Familiarize yourself with the Flavor Pyramid
- Taste-sized portions of the following vegetables, cut up for each student. (If these are not available, you can easily find other members of that “flavor family” by searching online. It is a good idea to survey students for food allergies if you are not familiar with them before this activity.)

  Flight 1: Sweet
  Sugar Snap Peas
  Carrots
  Sweet Potatoes

  Flight 2: Earthy
  Broccoli
  Beets
  Collard Greens

  Flight 3: Spicy
  Arugula
  Basil
  Radishes

- Small plate or paper towel, one for each student

Common Core Standards

- W.4.2 and W.5.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
Building a Food Vocabulary
The Flavor Pyramid

**Basic Tastes**
What basic tastes can you identify?
Examples: Sweet, sour, bitter

**Sensations**
What does your mouth feel like during and after you eat it?
Examples: Burning, cooling, numbing

**Textures**
What does the food feel like in your mouth?
Examples: Crunchy, smooth, crispy

**Aromas**
What do you smell?
Examples: Sweet, spicy, acidic

**Appearance**
How does the food look?
Examples: Dark green, bite-sized, round

**Emotions**
What memories or traditions do you associate with this food?
Examples: Good family meals, a painful stomach ache, delicious garden produce
Building a Food Vocabulary

Lesson Introduction

1. Give each student a Flavor Pyramid handout. Explain there are many things that influence how we taste and perceive food: emotion, appearance, smell/aroma, texture, sensation and basic tastes. Explain the importance of the different influences’ placement on the pyramid. For example, emotions are at the base of the pyramid, meaning that how we feel about a food, or past experiences with that food, will influence the way we taste something the most. Also, there are many factors that influence the basic tastes we experience. The growing conditions, distance traveled, seasonality and ripeness all affect the tastes of fruits and vegetables.

2. Ask students to write down different words or descriptive phrases that describe each of these influences. For example, words that describe sensation are burning, cooling, tingling.

3. Introduce the Flights of Flavor activity. Explain to the students that they will be tasting flights of vegetables with similar characteristics in sequential order and record their observations. Encourage students to try each sample. If they do not want to, explain they can take a "no thank you bite" and try the sample once and then leave it on the plate if they don’t like it.

Body of Lesson

4. Hand out the first flight of samples to students. Do not tell them which sample is which vegetable.

5. Walk students through the sampling procedure. Before trying each sample, make sure they go through the first three steps of the flavor pyramid and write down their observations.

6. After each flight, have students discuss what vegetable they thought they had tried, their favorites and the similarities and differences among the samples. After they finish discussing, tell students what they tried if no one has guessed it.

7. Repeat steps 1-3 for the next two flights.
Building a Food Vocabulary

Conclusion

8. Have students compare and contrast the different flights they tried and their observations.

9. As an in-class activity or at-home writing assignment, have students pick their favorite of the three flights or their favorite vegetable they tried and write a descriptive paragraph about their observations. Instruct them to pretend they are describing the vegetables to someone who has not ever tried them. What words might they use to convince this person to give it a try?

· Lesson adapted from Field to Plate Curriculum: fieldtoplate.com/edible-education.php
Lessons 3-5
The MyPlate Shuffle

MyPlate reminds us to eat a variety of foods each day and to make healthy choices about those foods. This lesson introduces students to the different food groups and the types of foods in each. Students will learn about these different food groups and the types of foods that go into them by way of a stretch-break dance that they can do anytime.

SUBJECTS

Science  Nutrition

GRADE LEVEL

3

TIME

30 min
The MyPlate Shuffle

Objectives

- Students will identify the MyPlate groups and categorize foods into each group
- Students will explain key nutrient(s) from a certain food group and explain nutrients’ relationship to overall health
- Students will develop questions about the importance of physical activity and healthy eating and relate these ideas to the book “Gregory the Terrible Eater,” by Mitchell Sharmat

Materials & Preparation

- MyPlate: chooemypate.gov
- Cut out images of food from grocery store ads. Place them into a box or bag. You will draw the images from this bag or box during the lesson activity.
- Read “Gregory the Terrible Eater” by Mitchell Sharmat. Use direct discussion and higher-level questioning with the standards in mind.

Common Core Standards

- RL.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- RL.3.6. Distinguish their own point of view from that of the narrator or those of the characters.
- RL.3.7. Explain how specific aspects of a text’s illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).
The MyPlate Shuffle

Lesson Introduction

1. Draw a large image of the MyPlate on the blackboard or whiteboard, large enough that you can write the food group names into each section of the plate.

2. Ask the students, one at a time, to name foods that they ate yesterday or today. As they name them, write those foods into the appropriate food groups. You may find that some foods are combination foods, such as pizza (milk, grains, vegetables and possibly meat).

Body of Lesson

3. Explain that scientists who study nutrition have put together MyPlate to guide us in making healthy food choices. Based on their research, they believe that we need to eat different types of foods every day to stay healthy. To help us make a variety of healthy choices, MyPlate divides foods into the following groups (point to these on the plate drawn on the board as you name them): grains, vegetables, fruits, dairy and protein.

4. In addition to eating different foods, scientists also tell us it is important to move and stay active for 60 or more minutes every day. When you stay physically active, your body just works better: muscles and bones are stronger, your energy level is higher and many times you even feel happier. In today’s lesson, we will get at least 10-15 of those minutes.

5. Explain to students that they are going to learn a dance called the food group shuffle to help them remember the different food groups and the types of foods that go into each.

6. Have students push desks apart and form a circle. Next, tell them that when they pull a picture of a food out of your bag (or box), they should do the appropriate food group dance move. These dance moves are:

- Grains – five jumping jacks
- Vegetables – twist and wave hands in the air
- Fruits – hop on one foot
- Dairy – twirl around one time
- Protein – run in place
The MyPlate Shuffle

7. Practice these moves with students until they know the different moves for each food group.

8. To play the MyPlate shuffle, draw pictures of the food out of the bag. Show students the picture and name the food. Students should then respond with the appropriate dance move. (Combination foods mean that students will need to do more than one move. If possible, though, try not to include these foods unless you come up with a system that tells students which food group they should honor first). Some students will make mistakes along the way, but will catch on by watching others if you provide feedback.

9. The food group shuffle is an activity you can play anytime to get students up and moving. Feel free to add music if you find a beat that gets them moving!

Extension

· Have students create their own healthy meal with their parents on the MyPlate sheet! Download online: choosemyplate.gov/print-materials-ordering.html
This lesson introduces students to the different food groups and the types of foods in each. Students will also learn why it is important to eat a variety of foods. With this knowledge, students construct a healthy lunch sack filled with foods from the different food groups.

**SUBJECTS**

- Nutrition
- Science

**GRADE LEVEL**

4

**TIME**

45 min
Sack It! Building a Healthy Lunch

Objective

· Students will identify the MyPlate groups and categorize foods into each
· Students will construct a healthy lunch containing foods from each of the food groups
· Students will explain what a nutrient is and its relationship to overall health

Materials & Preparation

· Copies of the MyPlate coloring sheet: choosemyplate.gov/print-materials-ordering.html
· Grocery store ads (at least one ad for every 2–4 students)
· Paper lunch bags for team or a copy of the lunch sack image
· Preview the following items to better understand concepts related to MyPlate:
  · Tips based on MyPlate are available at choosemyplate.gov
  · Pull up several examples of a well-rounded healthy meal by searching images of MyPlate for kids. Here is an example: choosemyplate.gov/food-groups/downloads/tentips/dgtipsheet11kidfriendlyveggiesandfruits.pdf
· In pairs or guided reading groups, have students read texts about food. (i.e. “What’s Cooking, Jenny Archer?” by Ellen Conford. Another shorter book that can be used is “A Forest is a Food Factory” by Erin Horner. Both books can be used to connect to students’ visual presentations of their lunch creations.

Common Core Standards

· RL.4.1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
· RL.4.7. Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.
Sack It! Building a Healthy Lunch

STEM Alignment
- Obtaining, evaluating, and communicating information
- Developing and using models
- Engaging in argument from evidence

Lesson Introduction
1. Ask students to raise their hands and when called on, ask them to name a food that they ate today or yesterday. Write 7–10 of these foods on the blackboard or whiteboard.

2. Explain that different foods provide different types of nutrients. Ask students: “What is a nutrient?” Most likely they will not know. Explain that a nutrient is a substance in food that helps us to stay healthy. Nutrients are divided into six groups: carbohydrates, fats, vitamins, minerals, protein and water. (Write these on the board). Explain that each nutrient has a different job when it comes to keeping us healthy. For example, fats and carbohydrates give us energy; minerals help to build strong bones, protein helps to build strong muscles and vitamins help to keep our eyes, skin and hair healthy.

Body of Lesson
3. Explain that scientists who study nutrition have put together MyPlate to guide us in making healthy food choices. Elaborate that the plate is divided into food groups based on the different nutrients those foods give us. Those food groups are: grains, vegetables, fruits, dairy and protein.

4. Pass out the MyPlate for Kids Coloring Sheet. Help students label the food groups. If you want students to create the color-coded plate, have them use crayons or colored pencils to label them as follows: Orange-grains; Green-vegetables; Red-fruits; Blue-dairy; Purple-protein.

5. Go back to the board where you wrote down the foods that students ate. As part of a discussion, label the foods with the different food groups. You and the students may find that some foods are combination foods, such as pizza (milk, grains, vegetables, and possibly meat).

6. Tell students that they are going to fill a lunch sack (or if you made copies of the lunch sack image, they will glue or tape images) with foods from each of the food groups to build a lunch.
Sack It! Building a Healthy Lunch

7. Divide the students into teams of 2–4. Provide each group with a grocery store ad. Tell students that as a team, they are to cut out images from the grocery ad to build lunches that contain at least one item from each of these food groups: grains, vegetables, fruits, dairy and protein. If you provided each team with a paper sack, they will drop the cut-out food images into the sack; if you provided each team with the photocopy of the paper sack, they will glue the images to the sack.

Conclusion

8. Have each team share the lunch they constructed with the class. There should be one food from each of the food groups. Note: sometimes one food might cover more than one food group.

9. As a class, help to make corrections as necessary. Explain that learning how to make healthy food choices is a skill, and like all skills it takes practice. To illustrate resources available to help with this, show some websites or recipes with projector technology, provide cookbooks (for example, “The Kids’ Multicultural Cookbook: Food & Fun Around the World” (Williamson Kids Can! Series) by: Deanna F. Cook (Author), Michael Kline (Illustrator), or other books with healthy recipe ideas, and encourage kids to check out cookbooks from the public or school library for inspiration. The key with this lesson is to make sure that you are eating foods from all of the groups every day to get the nutrients you need to stay healthy.

Extensions

· Homework/guided reading groups: Read a book about food. i.e. “What’s Cooking, Jenny Archer?” by Ellen Conford or “A Forest is a Food Factory” by Erin Horner. Have students make lunches at home and make connections and inferences between the Jenny Archer character and their own experiences and characteristics. Determine a theme of a story, drama, or poem from details in the text; summarize the text.

· Picture books “Fuel the Body” by Doering Tourville or “A Medieval Feast” by Aliki
Sack It! Building a Healthy Lunch
There are many misconceptions surrounding the concept of calories. This lesson will introduce students to the role of calories in healthy living and the management of calorie intake/output in regards to reaching and maintaining a healthy weight.
Calories In, Calories Out

Objectives

- Students will explain what a calorie is and what it means in terms of food eaten and activities performed
- Students will calculate whether someone has gained or lost weight
- Students will determine and discuss, with scaffolding, themes and/or characters (i.e. compassion, and bullying) and how they relate to their own feelings and experiences; they can also compare and contrast these themes and other books

Materials & Preparation

- Calculators (unless you prefer that they calculate the amounts on paper)
- Copies of the handout “Calories In, Calories Out”
- This activity will require classroom space for small groups of students to complete the following activities in stations: lying down on the ground, walking in circles (or back and forth a short distance), jumping jacks, running in place, and sitting on chairs

Common Core Standards

- RL.4.2. Determine a theme of a story, drama, or poem from details in the text; summarize the text.
- RL.5.2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.
- M.4.NBT. Fluently add and subtract multi-digit whole numbers using standard algorithm.
- M.5.NBT. Fluently multiply multi-digit whole numbers using standard algorithm.

STEM Alignment

- Reason abstractly and quantitatively
- Make sense of problems and persevere in solving them
- Model with mathematics
- Constructing explanations and designing solutions
- Using mathematics and computational thinking
Calories In, Calories Out

Lesson Introduction

1. Tell students they will be learning about what a calorie is and its role in healthy living. To kick off the lesson, they are going to rotate through five different activities at five different stations.

2. Demonstrate the five stations:
   · Lying down pretending to sleep
   · Walking in a small circle (or back and forth a short distance)
   · Jumping jacks
   · Running in place
   · Sitting in a chair pretending to watch television

3. Split students into five groups and assign each group to begin at one of the five stations. Students will stay at each station for one minute. Call/signal “time” every 60 seconds, with a short passing period, as they move to the next station.

4. Once students have rotated through all five stations, announce that during this activity they burned approximately 15.8 calories.

5. Write the following on a chalk/whiteboard:
   · Sleeping = 0.6 calories
   · Walking = 2.5 calories
   · Jumping jacks = 6 calories
   · Jogging = 6 calories
   · Watching television = 0.7 calories

Body of Lesson

6. What is a calorie?
   · Think-Pair-Share: Have students discuss their predictions about the question: “What is a calorie?” Next, have students discuss their answer with a partner and share some ideas with the class.
   · Define a calorie as: a unit to describe the amount of energy stored in a food, and the amount of energy used performing an activity... even sleeping! We need calories to keep our hearts pumping, our lungs breathing and our mind working. We also need them to move our bodies from one place to the next. In other words, we need calories to stay alive.

7. You may hear people talking about calories when they are trying to lose weight. People gain weight when they eat more calories than they burn,
Calories In, Calories Out

and they lose weight when they eat fewer calories than they burn. “What would somebody have to do in order to never gain or lose weight?”
Answer: The number of calories they ate would have to equal the number of calories they burned.

8. Read a related book such as “Nothing’s Fair in Fifth Grade” by Barthe DeClements or “The Berenstain Bears and Too Much Junk Food” by Jan and Stan Berenstain.

Calorie word problem

1. Tell students they will complete a math word problem to calculate if someone has gained, lost or maintained his weight. Distribute the Calories In, Calories Out handout.

2. State: Terry is a high school senior on the basketball team. She has been eating healthy, working hard at practices, and has reached a weight at which she feels strong, fast and confident. The Calories In, Calories Out handout lists foods Terry ate yesterday and the number of calories in those foods. It also lists the activities Terry performed and the number of calories burned doing those activities. If Terry’s goal is to maintain her current weight, is she on track?

3. Using the charts in the handout, students calculate the number of calories eaten and the number of calories burned. Answer: 2057 calories eaten; 2204 calories burned.

4. Explain that the calories burned are based on Terry’s weight of 100 pounds. People who weigh more would burn more calories because more energy is required to move a larger body around and keep them alive; people who weigh less would burn fewer calories because less energy is required to move them around and keep them alive.

5. To calculate if Terry gained or lost weight, one must: subtract the number of calories eaten from the number of calories burned. In the case of our word problem:
2057 calories eaten - 2204 calories burned = -147
The negative number means she burned more calories than she ate.
Ask: “So did she gain or lose weight?”
Answer: She lost weight.

· Note: Depending on the math level of students, you can also calculate how many pounds of fat she lost. There are 3500 calories in 1 pound of fat.
Calories In, Calories Out

To calculate fat lost or gained, divide the difference between the calories burned and eaten by 3500. In the case of our word problem, it would look like this: \(-147 \div 3500 = -0.042\) pounds of fat. Have students check their work with multiplication.

6. Ask: “If Terry wanted to make sure that she didn’t lose weight, what would she have to do?” Answer: eat more food (consume more calories) or do less activity (burn fewer calories.) Another option would be to eat foods higher in calories.

7. Explain that some foods have more calories than others. For example, \(\frac{1}{2}\) cup of apple slices has fewer calories (60 calories) than \(\frac{1}{2}\) cup of French fries (350 calories.) If someone were trying to gain or lose weight, not only can they change how much they eat, but also what they eat.

Conclusion

8. In conclusion, gaining weight and losing weight is a numbers game, and it is a numbers game you can play. Tie this into the theme of stories, compassion, and bullying. There are several websites you can use to keep track of the calories you eat and the calories you burn. Try the U.S. Department of Agriculture website choosemyplate.gov.

Extension

· Non-fiction current event reading or research about obesity and what it is costing society (emotionally and fiscally).

· Use the books “The Digestive System” by Christine Taylor-Butler or “Good Enough to Eat” by Lizzy Rockwell to connect to and come up with solutions to the characters’ problems.
### Calories In, Calories Out Handout

<table>
<thead>
<tr>
<th>Food Eaten</th>
<th>Calories Eaten</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast</strong></td>
<td></td>
</tr>
<tr>
<td>2 eggs, low-fat cheddar cheese omelet</td>
<td>320 calories</td>
</tr>
<tr>
<td>2 slices whole-grain toast</td>
<td>140 calories</td>
</tr>
<tr>
<td>1 small apple</td>
<td>47 calories</td>
</tr>
<tr>
<td><strong>Lunch</strong></td>
<td></td>
</tr>
<tr>
<td>Turkey sandwich (lettuce, tomato, 2 slices whole grain bread, 3 thin slices of turkey)</td>
<td>450 calories</td>
</tr>
<tr>
<td>½ cup of carrot sticks</td>
<td>40 calories</td>
</tr>
<tr>
<td>1 fruit cup</td>
<td>75 calories</td>
</tr>
<tr>
<td>1 glass (8 oz) of 2% milk</td>
<td>120 calories</td>
</tr>
<tr>
<td><strong>Snack</strong></td>
<td></td>
</tr>
<tr>
<td>1 granola bar</td>
<td>180 calories</td>
</tr>
<tr>
<td><strong>Dinner</strong></td>
<td></td>
</tr>
<tr>
<td>1 small baked potato with small pat of butter</td>
<td>180 calories</td>
</tr>
<tr>
<td>1 cup steamed broccoli</td>
<td>50 calories</td>
</tr>
<tr>
<td>2 slices (1 inch thick) meatloaf</td>
<td>250 calories</td>
</tr>
<tr>
<td>1 glass (8 oz) of 2% milk</td>
<td>120 calories</td>
</tr>
<tr>
<td><strong>Snack</strong></td>
<td></td>
</tr>
<tr>
<td>1 chocolate pudding cup</td>
<td>85 calories</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>???</td>
</tr>
</tbody>
</table>
# Calories In, Calories Out Handout

<table>
<thead>
<tr>
<th>Hours</th>
<th>Activity Performed</th>
<th>Calories Burned (for 100 lb. person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Sleeping</td>
<td>327 calories</td>
</tr>
<tr>
<td>2</td>
<td>Watching television</td>
<td>130 calories</td>
</tr>
<tr>
<td>6.5</td>
<td>Sitting at a desk at school</td>
<td>531 calories</td>
</tr>
<tr>
<td>1.5</td>
<td>Sitting/eating</td>
<td>102 calories</td>
</tr>
<tr>
<td>1</td>
<td>Walking to/from school</td>
<td>136 calories</td>
</tr>
<tr>
<td>2</td>
<td>Playing basketball</td>
<td>726 calories</td>
</tr>
<tr>
<td>1</td>
<td>Sitting while doing homework</td>
<td>81 calories</td>
</tr>
<tr>
<td>1</td>
<td>Getting ready in the morning/for bed</td>
<td>90 calories</td>
</tr>
<tr>
<td>1</td>
<td>Sitting/reading</td>
<td>81 calories</td>
</tr>
<tr>
<td></td>
<td><strong>24 hours</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total Calories Burned = ???
What’s a Serving?

There are many misconceptions surrounding the concept of serving size. This lesson will teach students what a serving size for a variety of foods looks like by comparing those servings to common objects. Students will also learn basic knowledge about nutrients and calories in regards to healthy living.

SUBJECTS

STEM Aligned  SCIENCE  NUTRITION  ART

GRADE LEVEL

3-4

TIME

30 min
What’s a Serving?

Objectives

· Students will be able to explain what a serving size is and its relationship to recommended amounts of nutrients and calories
· Students will be able to explain what a calorie is and what it means in terms of food eaten and activities performed
· Students will be able to explain what a nutrient is and its relationship to overall health
· Students will be able to describe what serving sizes look like for a variety of foods

Materials

· Crayons, paints, colored markers or colored pencils
· White 8 ½ x 11” paper
· Copies of the handout “What Does a Serving Look Like?”
· Measuring spoons and cups: teaspoon, tablespoon, ½ cup and 1 cup

Common Core Standards

· RI.3.5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
· RI.3.7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
· 3.OA.7. Multiply and divide within 100.
· 4.OA.2. Use the four operations with whole numbers to solve problems. Multiply or divide to solve word problems.

STEM Alignment

· Using mathematics and computational thinking
· Engaging in argument from evidence
· Obtaining, evaluating, and communicating information
What’s a Serving?

Lesson Introduction

1. Ask students where they have seen the words “serving size.”
   Food labels are a common answer. Bring foods labeled for each group to read and understand. Have students do the division or multiplication to determine the calories in different serving sizes.

2. Ask students: “What does serving size mean and why is it important?”
   Explain that a serving size is a guide to help you understand the amount of nutrients and calories that are in a food. They are also useful when thinking about the amount of food we are eating.

3. Ask students: “What is a nutrient?”
   Nutrients are divided into six groups: carbohydrates, fats, vitamins, minerals, protein and water (write these on a blackboard or whiteboard). Explain that each of these nutrients has a different job when it comes to keeping us healthy. For example, fats and carbohydrates give us energy, minerals help to build strong bones, protein helps to build strong muscles and vitamins help to keep our eyes, skin and hair healthy.

4. Ask students: “What is a calorie?”
   Explain a calorie is a unit to describe the amount of energy stored in a food and the amount of energy used to perform an activity.

Body of Lesson

5. Recap that serving sizes are guides to help us understand the amount of nutrients and calories in a given portion of food. Explain that sometimes it is difficult to picture what a serving size looks like. Comparing serving sizes for different foods to common objects can help.

6. Explain that they will be assigned one of 23 different foods. Their task is to draw a picture of their assigned food side by side with the common object to which its serving size is being compared. The key is drawing the food the same size as the object to help others understand the comparison being made. For example, 2 tablespoons of peanut butter should be drawn next to a golf ball, and the amount of peanut butter should be the same size as the golf ball.

7. Before assigning the students to a food, show them what a teaspoon, tablespoon, ½ cup, and 1 cup look like, as some students might be unfamiliar with these amounts.
What’s a Serving?

Conclusion

8. After students have drawn pictures of their foods and serving size comparison objects, let students share aloud their pictures.

9. If you choose, you can cluster the pictures based on food group to display in the classroom.

Extensions

· Use the books “The Digestive System” by Christine Taylor-Butler or “Good Enough to Eat” by Lizzy Rockwell to connect to the lesson.
What’s a Serving?

What does a serving look like?

The Bread, Cereal, Rice & Pasta Group
- 1 pancake
- ½ cooked cup rice, pasta
- 1 piece of corn bread
- 1 slice of bread
- 1 cup of cereal
- 1 bread roll

Object
- compact disc (CD)
- cupcake wrapper full
- bar of soap
- deck of cards
- fist or a tennis ball
- bar of soap

The Vegetable Group
- 1 cup green salad
- 1 baked potato
- ½ cup cooked vegetables

Object
- fist or a tennis ball
- fist or a tennis ball
- cupcake wrapper full

The Fruit Group
- 1 medium-size fruit
- 1 cup of cut-up fruit

Object
- fist or a tennis ball
- fist or a tennis ball

The Milk, Yogurt & Cheese Group
- 1 ounce of cheese
- 1/2 cup of ice cream

Object
- pair of dice or your thumb
- cupcake wrapper full

The Meat, Fish, Beans, Eggs & Nuts Group
- 2 tablespoons peanut butter
- 3 ounces cooked meat, poultry
- 3 ounces grilled/baked fish
- ½ cup cooked dried beans

Object
- golf ball
- a palm or a deck of cards
- a checkbook
- cupcake wrapper full

Fats, Oils & Sweets
- 1 teaspoon butter, margarine
- 2 tablespoons salad dressing
- 1 ounce of chocolate
- 1 ounce of small candies
- 1 ounce of chips or pretzels

Object
- a stamp the thickness of your finger
- a golf ball
- one package of dental floss
- one handful
- two handfuls
World Class Healthy Cooking Relay

Making healthy food choices is a skill no matter where you live. In this lesson, students learn about foods from other countries, healthy and unhealthy ways to cook foods, and the consequences of unhealthy cooking methods. New knowledge is assessed by way of a station-based relay race in which students match foods to the country of origin, and then sort the foods into healthy and unhealthy cooking methods. The activity also teaches students the geographic locations of the countries.

SUBJECTS

NUTRITION  SCIENCE  SOCIAL STUDIES

GRADE LEVEL

5

TIME

30 min
World Class Healthy Cooking Relay

Objectives

- Students will identify and describe common foods from other countries
- Students will explain healthy and unhealthy ways to prepare foods and describe consequences of unhealthy food preparation.
- Students will recommend healthy food choices from other countries

Materials & Preparation

- Space for two working stations: One station to sort food name cards by country, and one station to sort the food cards into unhealthy and healthy choices.
- Food cards—Cards include the name of a food, primary ingredients and cooking method. Make enough copies so that each team of students gets a complete deck of food name cards. Note: There are four foods per country. (See the Food and Country Reference Guide).
- World Class Foods Chart—Make one copy for each team. Teams label the chart with their assigned country’s name.

Common Core Standards

- RI.5.3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
World Class Healthy Cooking Relay

Lesson Introduction

1. Read: “Kids Around the World Cook!: The Best Foods and Recipes from Many Lands” by Arlette N. Braman

2. Initiate a discussion about how people from different parts of the world eat different foods. Ask: “What kinds of foods can you name that come from other countries?” Explain that they will hear about foods from the following places: China, Italy, India, and Mexico. Point out these locations on a map or globe.

Body of Lesson

3. Cooking Methods
   - Explain that there are unhealthy and healthy ways to prepare foods. Unhealthy cooking methods can lead to obesity, heart disease, cancer, diabetes and other health conditions.
   - List the following food preparation methods on the board: steam, grill, bake, broil, poach, roast, fry, stir-fry or deep fry. Ask students to predict how one performs each of these cooking methods. (See Cooking Methods Reference Guide).
   - Discuss and evaluate which cooking methods are healthy and unhealthy. (Note: It will be uncovered that methods that do not include deep frying are most healthy.)
   - Elaborate that like here in the United States, foods can be cooked in healthy or unhealthy ways in other countries.

4. Cooking Methods Relay Race
   - Split students into teams of 4 (if multiples of four are not possible, split students into groups of five, six or seven).
   - Assign each team a country. One half of the team goes to the food name cards station; the other half goes to the cooking methods sorting station.
   - At the food name cards station, team members are given a complete (and shuffled) deck of food name cards. They are to locate the four foods from their assigned country and bring those cards to their team members at the cooking methods sorting station. These members then take a seat.
   - At the cooking methods sorting station, team members sort the foods into unhealthy and unhealthy cooking methods. Next, they tape the name cards into the appropriate columns on the World Class Foods Chart handout, and they bring the completed chart to you.
World Class Healthy Cooking Relay

· Verify that food/country origins are correct and that the World Class Foods Chart is correct. If either is not correct, send the team back to the appropriate station(s) to make corrections. If the chart is correct, place it next to the appropriate country as displayed on a map.
· The first team done wins the relay race.

Extension

· Have students locate images of the foods from their assigned country. They can print these out and tape/glue the images onto the food name cards.
World Class Healthy Cooking Relay
Cooking Methods Reference Guide

<table>
<thead>
<tr>
<th>Method</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling</td>
<td>Food is submerged in boiling water.</td>
</tr>
<tr>
<td>Baking</td>
<td>Food is dry cooked in the oven.</td>
</tr>
<tr>
<td>Deep frying</td>
<td>Food is dropped into and completely submerged in heated oil.</td>
</tr>
<tr>
<td>Poaching</td>
<td>Food simmers in liquid—such as water, broth or juice—for a short period of time.</td>
</tr>
<tr>
<td>Roasting</td>
<td>Like baking, roasting uses dry heat. Food is kept moist by basting it with broth, water, fruit juice or low-fat marinade.</td>
</tr>
<tr>
<td>Stir frying</td>
<td>Food is cooked in a pan coated with a small amount of oil.</td>
</tr>
<tr>
<td>Grilling</td>
<td>Food cooks directly over heat source.</td>
</tr>
<tr>
<td>Steaming</td>
<td>Food is cooked over water rather than in it.</td>
</tr>
</tbody>
</table>
# World Class Healthy Cooking Relay

## Food & Country Reference Guide

<table>
<thead>
<tr>
<th><strong>Italian</strong></th>
<th></th>
<th><strong>Healthy</strong></th>
<th><strong>Unhealthy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaghetti—boiled pasta with tomato sauce</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Bruschetta—baked bread brushed with butter, topped with tomatoes, onions, and spices</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Vegetable Lasagna—pasta baked with layers of cheese, tomato sauce, and mixed vegetables</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Fried Calamari—squid covered with flour batter and deep fried</td>
<td></td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Chinese</strong></th>
<th></th>
<th><strong>Healthy</strong></th>
<th><strong>Unhealthy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fried Rice—stir-fried rice and vegetables stir-fried in oil</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Egg Rolls—vegetables wrapped in thin, flour dough and deep-fried</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Bok Choy—steamed, green leafy vegetable</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Chicken and Rice—poached chicken and steamed rice, with steamed vegetables</td>
<td></td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Indian</strong></th>
<th></th>
<th><strong>Healthy</strong></th>
<th><strong>Unhealthy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Samosa—deep-fried flour pastry filled with meat, vegetables, and potatoes</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Curry Chicken—chicken, vegetables and rice stir-fried in light oil</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Kheer—boiled rice, milk and sugar</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Biryani—roasted rice, meat and vegetable stew</td>
<td></td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Mexican</strong></th>
<th></th>
<th><strong>Healthy</strong></th>
<th><strong>Unhealthy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Guisado—roasted vegetable and meat stew</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Quesadilla—baked tortilla filled with meat and cheese</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Burrito—flour tortilla filled with steamed rice, grilled meat, and steamed black beans</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Pork Rinds—deep fried pork skins</td>
<td></td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>South African</strong></th>
<th></th>
<th><strong>Healthy</strong></th>
<th><strong>Unhealthy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mieliepap or Maize—porridge, boiled and simmered</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Morogo—roasted or boiled bean and beetroot leaves</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Plantains—deep fried</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Amadumbe—roasted or mashed sweet potato</td>
<td></td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>
# World Class Healthy Cooking Relay

## World Class Food Chart

<table>
<thead>
<tr>
<th>Country</th>
<th>Healthfully Prepared</th>
<th>Un-Healthfully Prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## World Class Healthy Cooking Relay

### Food Name Cards

<table>
<thead>
<tr>
<th>Burrito</th>
<th>Lasagna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour tortilla filled with steamed rice, grilled meat and steamed black beans</td>
<td>Pasta baked with layers of cheese, tomato sauce and meat.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fried Calamari</th>
<th>Pork Rinds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squid covered with batter and deep fried</td>
<td>Deep fried pork skins</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spaghetti</th>
<th>Samosa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiled pasta with tomato sauce</td>
<td>Deep-fried flour pastry filled with meat, vegetables and potatoes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bruschetta</th>
<th>Curry Chicken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baked bread brushed with butter, topped with tomatoes, onions and spices</td>
<td>Chicken, vegetables and rice stir-fried in oil</td>
</tr>
</tbody>
</table>
World Class Healthy Cooking Relay
Food Name Cards

- **Bok Choy**: Steamed, green leafy vegetable
- **Fried Rice**: Stir-fried rice and vegetables
- **Biryani**: Roasted rice, meat, and vegetable stew
- **Spring Rolls**: Vegetables wrapped in thin, flour dough and deep-fried
- **Chicken and Rice**: Poached chicken and steamed rice, with steamed vegetables
- **Kheer**: Boiled rice, milk and sugar
Walking the Walk: Learning with Pedometers

Pedometers are great tools for measuring physical activity levels and motivating students. Some PE departments may have funds for these or companies may be willing to make a donation for a healthy school initiative.

SUBJECTS

- PHYSICAL ACTIVITY
- SOCIAL STUDIES
- MATH
- STEM Aligned

GRADE LEVEL

4-5

TIME

30 min
Walking the Walk: Learning with Pedometers

Objectives

· Students will explain the importance of physical activity
· Students will calculate the number of steps taken during physical activity
· Students will identify and describe cultures, foods, and physical activities from other countries

Materials & Preparation

· At least one pedometer
· “Passports” for all of your students
· A map, posted somewhere in your classroom
· A “Destination Guide” or a list of cities, monuments, heritage sites or other attractions your class decides to reach as their mileage goals
· A “Travel Journal” or place for recording the number of steps and their mileage equivalent
· As the teacher, you decide how many steps read on the pedometer will equal a distance traveled. For example, 10 steps equal one mile. Have students round to the nearest tenth or mile. Have a world map hung near the Destination Guide so students can see where they’re headed next. Near the map and Destination Guide, the Travel Journal will indicate how many steps you’ve taken so far, and how many you need to make it to the next destination.

Common Core Standards

· 5.NBT. Understand the place value system. Round decimals to any place.

STEM Alignment

· Using mathematics and computational thinking
· Reason abstractly and quantitatively
· Obtaining, evaluating, and communicating information
· Model with mathematics
· Attend to precision
Walking the Walk: 
Learning with Pedometers

Lesson Introduction
1. Introduce the lesson to the students. You can wear the pedometer yourself and demonstrate various physical activities. Show them how many steps are recorded by walking around the room, doing jumping jacks and walking to the cafeteria. Show the students where the Destination Guide is hung next to the map, or a list of cities, countries, landmarks or heritage sites you decide as a class to “visit.” Ask students which cities in the United States or around the world they would like to “visit.” Make a graph and tally the votes for five to 10 different destinations! Introduce the Travel Journal, where the steps from the pedometer will be recorded.

Body of Lesson
2. Each day, you will also choose one student (or all, depending on the number of pedometers available for your classroom) to wear the pedometer. At the end of the day, the student wearing the pedometer can record in the Travel Journal the number of steps tracked and determine the mileage equivalent. The Destination Guide will also include facts about the destination, how many miles away the destination is from the school and the number of steps needed to reach the destination. As the students are recording more steps and about to reach a new destination, start exploring the facts.

Conclusion
3. There are several great ways to celebrate your accomplishments. Upon arrival to a destination, students can also journal or draw a picture about the journey they took to reach their mileage. What activity did they do to obtain mileage? What do they think about the place to which they traveled? What is something new they learned about their travel destination?
Walking the Walk: Learning with Pedometers

Extension

- Get parents involved! Send home a newsletter informing parents and guardians of your pedometer adventure. Ask them to get involved by recording their steps throughout the day and during physical activity as a family. Brothers and sisters can participate too! You can also post in the school newsletter or on the class bulletin when your students reach a destination. This will also be a great way for other students and classrooms to learn about your project. Finally, an excellent way to celebrate the accomplishments of the students and families and acknowledge their hard work in physical activities is to plan a themed party with games, crafts and healthy food centered around one of your destination’s cultures! Remember to round miles to the nearest tenth or mile.

Example “Destination Guide”

- Destination reached: ____________ (location name)
- Distance to the city (miles away from the school): ____________ miles
- Number of steps taken to reach that distance: ____________ steps
- Geographic Location (write or draw a picture about the destination, its geographic highlights and how the location looks)
- Traditions or Customs (write or draw a picture about a tradition or custom, unique to this geographic location)
- Activities (write or draw a picture of the destination’s major sports and describe what people there do for fun)
- Food (write or draw a picture of the types of food people near this destination eat)
The Power Inside Fruits & Vegetables

Fruits and vegetables contain vitamins, minerals, and antioxidants essential for maintaining good health and development in children. The first activity in this lesson introduces the essential nutrients in fruits and vegetables and is followed by a teacher-led science demonstration. This demonstration allows students to explore the levels of one of these important nutrients in different fruit and vegetable juices. With this knowledge, students will be better prepared to understand nutrient levels in foods and become more informed consumers.

SUBJECTS

- SCIENCE
- NUTRITION
- LANGUAGE ARTS

GRADE LEVEL

5

TIME

Day 1: 40 min  Day 2: 1 hr
The Power Inside
Fruits & Vegetables

Note: Lesson is divided across two days. Day 1 is the Understanding Nutrients activity and Day 2 is the Demonstration activity.

Objectives

- Students will learn the six key nutrients and understand two of them in detail
- Students can explain why nutrients are important for our health

Materials & Preparation

- Day 1
  - Familiarize yourself with the 13 essential vitamins, their functions, and common food sources.

- Day 2
  - Four cups water
  - Electric tea kettle or another appliance to boil water
  - Heat-resistant bowl or pot
  - Cornstarch
  - Measuring spoons
  - Measuring cups
  - Water glass
  - 10-milliliter eye droppers, one for each juice being tested
  - 2% Iodine solution (found at local pharmacy)
  - Safety: Because the solution contains free iodine, without dilution with water it can be irritating to the skin or eyes, or if ingested. You may want to wear rubber gloves if concerned.
  - Various fruit and vegetable juices. You may also want to test a fruit-flavored soda (such as pineapple, apple, orange, lemon, etc).
  - If your school has a garden or fruit trees, this experiment is a great opportunity to incorporate it in the classroom (contingent on season). Have students harvest produce such as apples, leafy greens and root crops. You will need to locate a juicer to break down the produce for the experiment.
The Power Inside
Fruits & Vegetables

- Small clear plastic cups (one for each juice being tested)
- 15-milliliter test tubes with stand or small plastic cups (one for each juice being tested; these will hold the iodine indicator solution)
- Stirring spoons
- Experiment Procedure and Materials handout, one for each student
- Prepare Experiment Procedure and Materials handout
- Prepare optional Experiment Log handout or have students record in their journals.
- Suggestions for Log contents or journal questions:
  - Pre lab questions - creating a hypothesis, identifying variables
  - Observation space - explaining results pictorially and with words
  - Post-lab questions - drawing conclusions, wrap up questions about vitamin C and other nutrients
- Boil four cups of water in a tea kettle. Pour into bowl/pot and add 1/3 teaspoon cornstarch and stir to dissolve. Allow this solution to cool completely.
- Once cool, measure ¼ cup of mixture into a water glass. Add eight drops of iodine. Stir. The mixture will turn dark blue.
- Pour about 1 tsp. of indicator solution into plastic cups or 15 mL test tubes.
- Pour a small amount of juice into individual plastic cups for each group.

Common Core Standards
- SL.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly
- W.5.3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
The Power Inside
Fruits & Vegetables

STEM Alignment

· Using mathematics and computational thinking
· Reason abstractly and quantitatively
· Obtaining, evaluating, and communicating information
· Model with mathematics
· Attend to precision
· Engaging in argument from evidence

Day 1
Lesson Introduction

· Explain the goals of today’s activities to the students: to explore the nutrients important for our health and well-being.

1. Ask students if they know examples of the nutrients we need to be healthy and write them down on the board. Explain to the class that today’s focus is on the essential vitamins humans need to grow, develop and maintain good health. There are six vital nutrients: carbohydrate, protein, fat, vitamins, minerals and water. Go over definitions of vitamins and minerals.

2. Vitamins: vitamins are organic, naturally occurring chemicals we must get through our food because our bodies do not produce enough by themselves.

3. Minerals: minerals are inorganic elements that come from soil and water and are absorbed by plants.

Day 1
Body of Lesson

4. On the board, list the 13 essential vitamins with their functions on one side and a list of their food sources on the other side. Facilitate a class discussion to help students learn which foods contain which vitamins. Which ones grow nearby? Which ones grow in different parts of the world?

5. If students don’t know the answers to these questions, you can help them look up the answers in a reference book or online. A comprehensive source on the different vitamins and minerals is “The Real Vitamin and Mineral Book” by Nancy Pauling Bruning.
The Power Inside
Fruits & Vegetables

Day 2
Lesson Introduction

1. Introduce the demonstration science experiment comparing relative levels of vitamin C in fruit and vegetables juice. (Note: this is a teacher-led demonstration. The lesson can easily be modified for students to do on their own or in groups, however a demonstration will decrease the time and difficulty involved.)

2. Hand out Lab Procedure and Materials handout and Experiment Log handout

3. Explain the objective of the lab: to determine which juice has the highest content of vitamin C. On the pre-lab sheet, ask students to write down their hypotheses about how the Vitamin C levels will compare between the juices. (Note: You might want to mention that fruit juices should be students' second choice after whole fruits because we lose some of the other nutrients like fiber.)

Day 2
Body of Lesson

4. Using the Lab Procedure and Materials handout, review the materials and preparation necessary. Go over the safety precautions involved with the iodine solution.

5. Review the variables involved in the experiment.

6. Using the lab procedure handout and walk through lab procedure with students.

7. Have students get together in small groups and complete the pre-lab questions.

8. Once completed, ask for student volunteers to instruct as you carry out, step by step, on one round of the experiment. For the following rounds, you can call on students to physically carry out steps of the procedure.
The Power Inside Fruits & Vegetables

9. Procedure:
   · Pull 10 mL of one type of juice into the dropper.
   · Observe and note the color of the iodine solution.
   · Add to iodine solution and stir with a clean spoon.
   · Observe and note the color of the mixture.
   · Repeat part one for each juice you want to test. Always use a clean eyedropper and spoon for each juice.
   · After testing all juices, hold up the cups to a white background and order from lightest to darkest. The lighter the solution, the greater the vitamin C content.

Conclusion

10. Discuss why the experiment works by illustrating it pictorially on the board. This experiment works because iodine molecules and starch molecules hook together in solution, causing the blue color. The solution is an indicator for vitamin C, meaning it tells you if vitamin C is present. Vitamin C breaks these molecules apart and causes the solution to lose its color. So the lighter the solution is, the more vitamin C the juice contains.

11. Clean up. After the remaining iodine solution is diluted with water, it can be safely poured down the drain.

12. Have students work in groups to complete the remaining exercises in the Experiment Log or in their journals.

In this lesson, students will learn about healthy eating as well as the culture and history of Cuba.

SUBJECTS

NUTRITION
SOCIAL STUDIES

GRADE LEVEL

1-8

TIME

1 hr


Lunch in Havana

Objectives

- Students will identify and describe common foods from other countries
- Students will explain how cultures around the world are nutritionally similar and different
- Students will recommend healthy food choices from other countries
- Students will explain culture, geography and location of another country

Materials & Preparation?

- “Cuba” by Christine and David Petersen
- Map of the world
- Coloring and drawing materials

Common Core Standards

- Note: Common Core Social Studies standards for 1-5th grade have not been developed as of July 2012. The following come from the 6-8th grade standards.
- RH.6-8.4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
- RH.6-8.1. Cite specific textual evidence to support analysis of primary and secondary sources.
- RI.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

Lesson Introduction

1. Read “Cuba” by Christine and David Petersen.
2. Initiate discussion about how people from different parts of the world eat different foods. Ask, “What kinds of foods can you think of that come from other countries?” Explain that they will learn about foods from Cuba and what other regions of the world inspire Cuban cuisine.
Lunch in Havana

3. Point to Cuba on the map. Tell the students facts about the location and geography of Cuba:
   - Cuba is located 90 miles south of Florida in the Caribbean Sea
   - Cuba is the biggest island in the Antilles Archipelago, a chain of islands
   - The area of Cuba is about 44,218 square miles, only slightly smaller than the state of Pennsylvania

Body of Lesson

4. Here you will explore the Cuban culture. Explain to the students that Cuba was once colonized by Spanish and French and that those countries brought to the island many African slaves. Then describe how Cuba’s history is reflected in the food, language, art and music. Cuban cuisine is a fusion of Spanish, African and Caribbean cuisines. Cuban recipes share spices and techniques with Spanish and African cooking. Because Cuba is an island, fish is a staple influence on the cuisine. The Cuban climate is also tropical, so the island produces many fruits such as plantains that are used in dishes and meals. A typical Cuba meal would consists of rice and beans, a meat and some sort of vianda (potato, yucca, or plantain). Ask the students what their Cuban Lunch consisted of (your Cuban-inspired lunch will contain beans, rice, vegetables, chicken and salad with avocado, cheese and plantains). Discuss with students which food groups you can find the items in their lunch, and why these are healthy options.

Conclusion

5. Have your students write about or draw a picture of their favorite part of the Cuban meal. Ask them how they will use what they have learned about Cuba, the culture and the food they eat the next time they are grocery shopping with a parent. Ask students to write about or draw a picture of another time they ate a meal that had influences from other cultures and to think about items they eat at home that might be similar to the beans, rice, and vegetables they ate during the lesson’s meal. Ask students to accompany an adult at home when they go grocery shopping. Together, ask them to pick out a new fruit or vegetable that they have never tried before.
Tracing the Food System: An Investigation of a Chicago Public Schools Meal

This lesson will allow students to make the connection between the food they eat at home and at school and the people, plants, and animals that provide it. Students will study the recipes of the winning school meal from the Cooking up Change® Chicago competition and write creative narratives of a chosen ingredient along its journey of farm to tray.

SUBJECTS

NUTRITION  LANGUAGE

ARTS

GRADE LEVEL

4-5

TIME

1 hr
Tracing the Food System

**Note:** This lesson can easily be shortened if you do not wish to study all major components of the meal.

### Objectives
- Students will be able to provide answers to the core question, “Where does our food come from?” They will be able to describe the sequence of agricultural production from soil to food product.

### Materials & Preparation
- Recipe cards with the three recipes, one set for each student
- Create a flow chart handout or have students record in their journals
- Familiarize yourself with the main ingredients in the three recipes. Be prepared to talk about where these foods come from. For a sample flow chart of the conventional broiler chicken production process, refer to “Ingredients of the Food System” curriculum from John Hopkins Center for a Livable Future. See slides 6-9: [jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/_pdf/Ingredients_of_the_Food_System-Slides.pdf](http://jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/_pdf/Ingredients_of_the_Food_System-Slides.pdf)
- For additional background information, refer to the “Background Reading” section of the curriculum: [jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/_pdf/Ingredients_of_the_Food_System-Background.pdf](http://jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/_pdf/Ingredients_of_the_Food_System-Background.pdf)

### Common Core Standards
- W.4.3. and W.5.3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
Tracing the Food System

Lesson Introduction

1. To introduce the lesson, explain to the students that they will be investigating the food we eat and tracing it back to its origins.

2. Initiate a discussion about the meaning and importance of food in the students’ lives. Possible questions include: Why is food important to you? What role does food play in your families? Do you have traditions or celebrations that involve special dishes? How do you determine if you would eat a food product or not? In other words, how do you determine if a food is good or not?

3. Broaden the discussion and explain to students that there are activities involved to bring those important foods to the table. Ask them to brainstorm which people are typically involved in these activities or supply chain and write ideas on the board. Explain that there are many people involved along the food supply chain in areas of production, processing, distribution, retail, and consumption.

4. Lastly, ask students to brainstorm the possible impacts of this supply chain and food production on our health and the environment. Possible prompts include: How does the land used to raise animals and crops affect the health of our environment? What products do farmers use to raise crops and animals?

Body of Lesson

5. Hand out recipe cards and flow chart handout, or have students record in their journals.

6. Starting with one of the vegetable side dishes, ask students to read out the ingredients on the recipe and write them on the board.
Tracing the Food System

7. With each main ingredient, ask the students, “What is the origin of this ingredient?” If they respond with a grocery store or restaurant, ask them to think further back than that.

8. You can help them visualize the process by drawing a flow chart on the board starting with growing the food to the final step of consuming it. Intermediate steps include processing, distribution and retail. Students should complete their own flow charts on their handout or in their journals.

9. If time permits, go through the same process with the oven-fried chicken recipe. The chicken in this specific recipe has a somewhat different story than conventional broiler chickens. Chicago Public Schools sources a large portion of their chicken from Miller Amish Country Poultry Farms in Indiana, a farm 150 miles away where chickens are raised according to animal welfare standards and do not receive antibiotics or hormones. This flow chart could be a bit more complicated because you can also include a subsection devoted to growing chicken feed (corn and soy).

Conclusion

10. For homework or an additional in-class activity, ask students to write a narrative from the perspective of one of their favorite foods as it travels from the farm to their plate. Students can also write from the perspective of someone (farmer, truck driver, grocer) along the food chain. Ask them to describe the sequence of growth, processing, and transportation using details and sequence words such as first, next, after that, etc.

· Lesson adapted from Johns Hopkins Center for a Livable Future Food Systems Curriculum: jhsph.edu/research/centers-and-institutes/teaching-the-food-system.
Sweet Potato Salad

**Ingredients**
- 1 ½ lb diced sweet potatoes
- 1 cup frozen corn
- ½ cup kidney beans, drained
- ⅛ cup diced green pepper
- ¾ cup mayonnaise
- 1 T lemon juice
- 1 ½ tsp cumin
- ½ tsp Cajun seasoning

**Preparation**
1. Bring water to a boil in a large saucepan; add sweet potatoes and corn. Boil until tender, about 6-7 minutes.
2. Place vegetables in an ice bath; drain well and place in a large bowl. Add kidney beans.
3. In a medium bowl, combine green bell pepper, mayonnaise, lemon juice, cumin, and Cajun seasoning.
4. Stir dressing into mixture of sweet potatoes, corn and beans. Mix well.
5. Refrigerate until ready to serve.

“Cousins” Collard Greens & Cabbage

**Ingredients**
- 2 quarts water
- 1 T butter
- 1 T chicken base
- 1 ½ lbs green cabbage, chopped
- 1 T Cajun seasoning
- ½ tsp Southern seasoning (or onion powder, sage, black pepper and cayenne to taste)
- ½ tsp Italian seasoning
- ¼ c diced carrots
- 1 c diced Spanish onion
- 2 quarts water
- 1 ½ lbs frozen chopped collard greens

**Preparation**
1. Melt butter in a large pan. Sauté onions and carrots until vegetables are tender. Set aside.
2. Bring water and chicken base to a boil in a stock pot and add collard greens, cooking until tender, approximately 10 minutes.
3. Add onion and carrot mixture; cover and simmer for an additional 10 minutes.
4. Add cabbage and Cajun and Italian seasonings; cover and simmer for an additional 10 minutes.
5. Turn off heat and add Southern seasoning.

Oven-Fried Chicken

**Ingredients**
- ¾ c Rice Krispies cereal
- ½ tsp ground black pepper
- ½ tsp paprika
- ½ tsp garlic powder
- ⅛ c melted butter or cooking spray
- 8 chicken drumsticks, raw
- ½ T Cajun seasoning
- ½ tsp poultry seasoning

**Preparation**
1. Preheat oven to 450° F.
2. In a large bowl, combine flour, crushed cereal, Cajun seasoning, poultry seasoning, pepper, paprika and garlic powder. Mix well.
3. Place drumsticks into flour mixture and coat well.
4. Arrange drumsticks on an ungreased sheet pan.
5. Place melted butter in a spray bottle (or use cooking spray) and spray chicken evenly.
6. Bake at 450° F until the internal temperature of the chicken is 165° F, approximately 25-30 minutes.
7. Serve with whole wheat dinner roll and enjoy!
Resources
Fact Sheet: Linking Health + Wellness to Academic Achievement

The link between health and learning is clear: Healthy, active and well-nourished children are more likely to attend school, be ready to learn and stay engaged in class. The reality is that one in four children today has a chronic disease, and those conditions affect their ability to attend school and their ability to learn when they are in school.

The good news is that schools play an important role in supporting student health and wellness. As a teacher, you’re often on the front lines of many of these issues. At the end of this document, we’ve outlined practical ways you and your school can support the health and wellness of your students—and ultimately, ensure they all have the opportunity to be the best learners they can be.

The Impact of Chronic Health Conditions
The prevalence of chronic diseases—including asthma, obesity and diabetes—has doubled among children over the past several decades. These health concerns disproportionately impact low-income African-American and Latino students, signaling health disparities as a possible catalyst of the academic achievement gap.¹

In particular, obesity rates have skyrocketed among children—both in Chicago and nationwide. While nearly one-third of students nationwide are overweight or obese, 43 percent of Chicago students are overweight or obese.² The obesity rate among students of color are even higher. Consider these alarming statistics:

- 26 percent of white kindergartners in CPS are entering school overweight or obese compared to 34 percent of African-American students and 42 percent of Latino students.
- The obesity rates vary drastically between Chicago community areas, from 26 percent in Lincoln Park to 38.33 percent in Douglas to 52.3 percent in South Lawndale.
- Less than 20 percent of Chicago high school students were physically active at least 60 minutes per day per week.

Until we address the health disparities that many low-income students of color face, learning disparities will persist. We can create a better future for our children and our nation by improving health in schools.

Creating the Conditions for Student Health and Academic Achievement
While the challenge is great, creating environments that support student health and wellness can have a profound impact on both the health and academic achievement of students. Schools can help students’ efforts to eat healthy and be active by implementing policies and practices that support healthy eating and regular physical activity and by providing opportunities for students to learn about and practice these behaviors.

Schools are better poised to meet educational goals, decrease rates of chronic absenteeism, reduce behavior problems and increase academic achievement by focusing on improving health and wellness. Here are a few ways healthy eating and physical activity impacts student educational success.
## Fact Sheet: Linking Health + Wellness to Academic Achievement

<table>
<thead>
<tr>
<th>Nutrition Practice</th>
<th>Related Academic Achievement Outcome</th>
</tr>
</thead>
</table>
| Participation in the School Breakfast Program | · Increased academic grades and standardized test scores  
· Reduced absenteeism  
· Improved cognitive performance |
| Skipping breakfast | · Decreased cognitive performance |
| Lack of adequate consumption of specific foods, deficits in specific nutrients, insufficient food intake | · Lower grades  
· Higher rates of absenteeism  
· Repeating a grade  
· Inability to focus |
| Eliminating the availability of chips, candy and sugary drinks and other foods of minimal nutritional value during the school day. | · Can improve concentration in the classroom  
· May increase student consumption of healthful foods such as fruits and vegetables  
· Students’ behavior may improve and cause fewer disruptions in the classroom. |
| Children who grow their own food are more likely to eat fresh fruits and vegetables. School gardens are a great way to integrate core subjects and nutrition education. | · Students participating in school gardening activities scored significantly higher on science achievement tests than students who had a curriculum without garden experiences.  
· Garden-based learning shows significant increase in social emotional and interpersonal skills compared to nonparticipating students. |
<table>
<thead>
<tr>
<th>Physical Activity Practice</th>
<th>Related Academic Achievement Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students who are physically active</td>
<td>· Have better grades, better school attendance, and better classroom behaviors</td>
</tr>
<tr>
<td>Higher physical activity and physical fitness levels</td>
<td>· Improved cognitive performance</td>
</tr>
<tr>
<td>More participation in physical education class</td>
<td>· Better grades, standardized test scores and classroom behavior</td>
</tr>
<tr>
<td>Time spent in recess, scheduling recess before the lunch period</td>
<td>· Improved cognitive performance and classroom behaviors</td>
</tr>
<tr>
<td></td>
<td>· Increased consumption of meals and less waste</td>
</tr>
<tr>
<td>Participation in brief classroom physical activity breaks</td>
<td>· Improved cognitive performance, classroom behaviors, and education outcomes</td>
</tr>
<tr>
<td>Participation in extracurricular physical activities</td>
<td>· Higher GPAs, lower drop-out rates and fewer disciplinary problems</td>
</tr>
</tbody>
</table>
Fact Sheet: Linking Health + Wellness to Academic Achievement

Why Missing School Matters

Missing just two days of school per month means a student is chronically absent. Chronic absenteeism—or missing 10 percent or more of school days for any reason, excused or unexcused—detracts from learning and is a proven early warning sign of academic risk and school dropout. Nationwide, a staggering number of children are chronically absent, often at a very young age and often without attracting attention or intervention. One in five CPS kindergartners is chronically absent, and 15 percent of CPS students in kindergarten through third grade are chronically absent.

While the causes are multi-fold, one stands out as especially significant: student health. Students with unmanaged chronic health conditions (such as asthma or diabetes) are more likely to miss class because of the symptoms of their illness or because they are receiving medical treatment during the school day. Compounding the problem is the fact that many students do not have access to healthy school environments. Consider these national statistics:

- Children with persistent asthma are more than three times as likely to have 10 or more absences than their peers.
- Children between 5 and 17 years miss nearly 2 million school days each year nationwide due to dental health problems.

The crisis of health-related chronic absenteeism is especially poignant as it primarily affects young children in ways that can shape academic outcomes for their entire school career. For example, research shows that children who are chronically absent in both kindergarten and first grade (such as children who suffer frequent asthma attacks) are much less likely to be reading at grade level by the third grade; and students who are not reading at grade level by the third grade, in turn, are four times more likely to drop out of high school.

References

Fact Sheet: Educationally Relevant Health Disparities

In Healthier Students Are Better Learners (Equity Matters, March 2010), Dr. Charles Basch identifies seven health disparities that have a significant effect on education for urban students of color: vision, asthma, teen pregnancy, aggression and violence, physical activity, breakfast, and inattention and hyperactivity. Basch notes the prevalence of these disparities and identifies proven or promising strategies that research supports as effective in addressing these disparities in schools.

Please note: All research cited in this overview is from Charles Basch’s Healthier Students Are Better Learners.

**Asthma**

Asthma affects urban students of color in low-income communities at high rates, especially severe asthma. Additionally, they are less likely to receive ongoing high-quality health care related to this condition and less likely to have access to the recommended medications. They are also more likely to be exposed to asthma triggers at home and at school.

Proven or promising strategies: Schools play a key role in addressing asthma in children. In particular, schools can have a great impact by minimizing asthma triggers within the school environment and helping students with asthma access ongoing, high-quality medical care. The recommended approach favors treatment for students known to have asthma rather than broader screening for asthma.

**Breakfast**

Eating breakfast is linked to higher educational outcomes because of the way the brain responds to food after the short fast during sleep, but low income students of color are more likely than their white peers to attend school without having eaten this key meal. This disparity is particularly pronounced for females and is shown to increase with age.

Proven or promising strategies: Schools can greatly influence the rate at which students of color eat breakfast. The National School Breakfast Program provides a nutritious breakfast at school. Two strategies for implementing this program are shown to be particularly effective: providing breakfast to all students regardless of income (universal breakfast), and allowing students to eat their breakfast in the classroom.
Fact Sheet: Educationally Relevant Health Disparities

Physical Activity

Rates of physical activity fall significantly below recommended levels for most children and teens, with particularly low rates for African-American and Latino students. These disparities are even greater for African-American and Latino females. The groups disproportionately affected by low rates of physical activity are also the least likely to have access to physical activity at school.

Proven or promising strategies: Research shows that schools can effectively increase physical activity for all students, including those most at risk of related disparities, by providing a range of programs including high-quality physical education, opportunities for physical activity before/after school and during the summer, active recess and breaks for physical activity built into classroom time. Data indicate that reserving time for physical activity is linked to neutral or increased test scores. Research also shows that community program, such as those with nonprofit groups, can help schools improve access to physical activity.

Aggression & Violence

Exposure to aggression and violence disproportionately affects students of color across a variety of indicators, ranging from homicide to hate speech. For example, African-American male teens are 10 times more likely to die from homicide than their white peers. Verbal aggression in the form of hate speech or hate-related graffiti is experienced significantly more often by urban students of color compared to suburban students. Urban students of color are also more likely to miss school because they feel unsafe either at or on their way to school.

Proven or promising strategies: Evidence shows that school-based programs are effective at addressing disparities in violence and aggression. Universal programs that address all students and targeted programs that address those most at risk are both shown to be effective in different circumstances. Researchers emphasize the importance of schools implementing these programs and encouraging the adoption of a model that is most likely to be implemented on a consistent basis.

Vision

Approximately one in five school-aged children is affected by a vision problem. Research shows that children from low-income families and children experiencing problems in school are disproportionately affected by vision problems. Research also shows that low-income and students of color are at greater risk of undiagnosed vision problems. When these problems are diagnosed, low-income and students of color are less likely to receive proper treatment.

Proven or promising strategies: Vision screening in schools is a key first step to identifying and providing treatment to all children for vision problems. The critical second step is follow-up to either provide treatment or work with families to identify an accessible treatment option. The third important step is for teachers to play a role in encouraging students to follow their recommended treatment—such as wearing their glasses—at school.
**Teen Pregnancy**

Data shows that one third of teenage females in the U.S. become pregnant, with rates significantly higher among students of color. In 2006, for example, the number of 15-17 year-olds giving birth was three times higher among African-American students and four times higher among Latino students than among white students. Research also shows that students living in poverty face disproportionately high rates of teen pregnancy. Studies link teen pregnancy to a lack of opportunity to realize aspirations, as in the context of poverty and racism.

Proven or promising strategies: Schools can play a key role in addressing this disparity by providing comprehensive and evidence-based sex education, in the context of an overall educational approach that encourages students to identify and work toward their aspirations. Schools can also link students to accessible health care, including reproductive health services, and for students who do become pregnant, connect them to the appropriate health and social services.

**Inattention & Hyperactivity**

Problems with inattention and hyperactivity are the most common type of mental and behavioral health problems that affect students, with approximately 8% of American children receiving a diagnosis of attention-deficit/hyperactivity disorder (ADHD). This rate is disproportionately higher for children living in poverty. Urban students of color in low-income communities are significantly less likely to receive appropriate treatment or medication for ADHD.

Proven or promising strategies: Schools can play a role in addressing this disparity by helping identify children who exhibit ADHD characteristics and monitoring the effectiveness of treatment or medication. Schools can also have a positive impact by providing behavioral intervention and ensuring that teaching and classroom strategies account for the needs of students with ADHD.
About the CPS Wellness Policy

CPS has adopted three policies that promote healthy eating and physical activity. They include: the Local School Wellness Policy, the Healthy Snack and Beverage Policy and the Physical Education (PE) Policy. Combined, these policies address nutritional standards for food served in cafeterias and vending machines as well as requirements for nutrition education and physical education.

In June 2017, the Chicago Board of Education adopted a new Local School Wellness Policy, a new Healthy Snack and Beverage Policy and a Breakfast After the Bell Classroom Policy. The newly adopted policies include a number of provisions that advance the health and wellness of students. The policies strengthen school food policy, increase access to nutritious foods, restricts junk food marketing, and promote healthy classrooms and schools.

As a teacher, you can help your school on the path to Healthy CPS certification by joining and working with your School Wellness Team. Wellness teams are a key way to ensure that wellness initiatives are being put into action. As a team, you can become familiar with the Local School Wellness Policy, Healthy Snack and Beverage Policy and PE policy, download and fill out the school wellness checklist to see what criteria your school is already meeting and what areas need upgrading, create an Action Plan and identify resources and implement healthy changes.

An overview of key elements of the wellness policy:

**Mechanisms of Accountability**

- **District Reviews:** The policy requires a district-wide review of the wellness policy by December 2020 and requires that the Chief Health Officer annually convene a multi-stakeholder district wide committee.
- **School Progress Report Measure:** The district is responsible for providing an annual healthy school indicator that reflects an individual school’s health and wellness environment and their compliance with the wellness policy and other related board policies.
- **Wellness Champion, Wellness Teams and Local School Councils (LSC):** The school wellness champion, designated by the principal, is required to lead and coordinate the school’s efforts to comply with the wellness policy and serve as the liaison to the CPS Office of Student Health and Wellness. Every school is required to convene a wellness team to lead the implementation of the policy at the school level. The school principal is required to provide quarterly updates to the LSC. Schools are also required to report progress to the Office of Student Health and Wellness through an annual survey and when requested.

**Healthy CPS**

The Healthy CPS Indicator is a comprehensive health-focused measure included on the CPS school progress report. The indicator measures how well a school is meeting the wellness policy requirements, including the ones listed above. CPS collects information through its annual Healthy CPS Survey. This survey also gives schools the opportunity to report on their current health and wellness initiatives.

By including a health-focused metric on school progress reports, the district helps ensure student health and wellness are priorities and that school stakeholders understand the connection between health and learning.
School Meals and Other Foods

- **Meal Standards**: The policy requires all schools to meet federal, state and local laws. All schools that have CPS as their school food authority are required to meet the CPS Food Service Guidelines for school meals.

- **Meal Access**: The policy requires all schools to provide universal free breakfast and lunch for all students.

- **Mealtimes**: School principal will ensure that students receive at least 10 minutes to eat breakfast and at least 20 minutes to eat lunch. Lunch periods must be scheduled in accordance with scheduling guidance issued by Department of Teaching and Learning.

- **Breakfast After the Bell**: All schools are required to provide school breakfast after the bell. At the elementary and middle school level, breakfast will be provided to students through a breakfast in the classroom model or a grab n’ go breakfast model. At the high school level, breakfast will be provided to students through a variety of models including breakfast vending, second chance breakfast, grab n’ go and hybrids.

- **Local procurement**: The policy requires that local food items be a part of the school meal program by serving frozen-local once per week, fresh-local twice per month, and local no antibiotic ever chicken twice per month; or more often as items become available and fiscally feasible.

- **Other foods and beverages**: The policy requires that all foods and drinks sold on school grounds, including items in vending machines, à la carte lines and school stores, meet specific nutritional criteria outlined in the Healthy Snack and Beverage policy.

- **Marketing**: The policy restricts food and beverage marketing during the academic school day to only those foods and beverages that meet the Healthy Snack and Beverage policy, sending a consistent health promoting message to students and their families.

Student Rewards and Punishments

- **Rewards**: When rewarding students, school staff are required to use non-food rewards or foods that meet standards outlined in the policy.

- **Punishments**: Teachers and staff must not withhold food (including school meals) or physical activity as punishment to students (including recess and physical education).

Nutrition Education

- **National standards**: The school principal is responsible for selecting a curriculum that aligns with the National Health Education Standards and the CPS Health and Education Scope and Sequence.

- **Curriculum requirements**: All elementary schools must integrate nutrition education at all grade levels as a systematic unit of instruction. Middle schools must integrate nutrition education in two grade levels as a systematic unit of instruction. High schools must provide nutrition education as an integrated systematic unit of instruction in two required courses.

- **School Gardens**: Nutrition education programming will link the classroom, dining center and the school garden (if applicable). All schools with edible school gardens will adhere to the Eat What You Grow policies and procedures. Eat What You Grow is a school garden food safety program that allows school garden produce to be served in the classroom and school dining center.

- **Dining Center**: Schools shall engage school dining staff in wellness activities that support nutrition lessons beyond the classrooms and into the school dining centers to encourage and promote healthy
About the CPS Wellness Policy

eating habits. This includes reinforcing healthy food messages in the dining center or conducting taste tests or cooking demos and more.

· Parent Engagement: All schools should engage parents and guardians in nutrition education.

Recess and Physical Activity

· Daily Recess: All elementary schools must provide at least 20 minutes of daily recess.

· Recess before lunch: Schools should schedule recess prior to students’ lunch periods because studies show that meal plate waste is reduced and there are less behavior incidents.

· Daily Curriculum integration: All core subjects including math, science, language arts, health and family consumer sciences should maximize student attention and focus by integrating movement daily.

· Continuous physical activity opportunities: Schools shall provide all students with additional daily opportunities for moderate to vigorous physical activity before, during and after school in addition to recess and physical education. Also schools will encourage students to engage in activities outside of school hours for a minimum of 15 to 30 minutes on five or more days per week through participation in community programs, after school programs and/or before school programs.

· Inactivity reduction: Schools should provide periodic breaks during which students are encouraged to be moderately to vigorously active. Extended periods (two hours or more) of time when a student is not physically active are discouraged.

· School-community shared use: Schools are encouraged to open indoor and outdoor facilities for use during non-school hours for use by students, their families and the larger community.

Physical Education

· Daily PE: Elementary schools must provide physical education for a minimum of 30 minutes daily or the equivalent of 150 minutes per week. High schools must provide daily physical education in the same time increments as other courses.

· PE Curriculum: Schools must offer physical education that is consistent with health-optimizing physical education learning objectives and strategies established by the Chief Instruction Officer.

· Waivers: High school students can request an individual student waiver for PE on an annual basis if the student meets approved exemptions outlined in the policy.

· Evaluation: Periodic evaluations and a report on district-wide and individual schools’ compliance with the PE policy is required to be provided by OSHW to the Chicago Board of Education twice per calendar year.

Student Celebrations and Fundraisers

· Competing Foods: Schools may not serve or sell food in competition with service of the National School Breakfast or School Lunch Programs.

· Celebrations: A school may have a maximum of two celebrations per school year that permit food or beverages of minimal nutritional value to be served to students.

· Fundraisers: All food or beverage used or sold for school fundraising purposes during the school day must meet the nutrition requirements set out in the wellness policy. All non-food fundraisers must be approved by the Network Chief: All food fundraisers must be approved by the Nutrition Support Services Executive Director or designee. Schools will be required to forfeit revenue from the sale of non-approved items.
Building Your Team
Although individuals within schools can make big strides toward school wellness, real progress takes a great team. Use these tips to create a strong support system for a healthy school environment.

First, schools should nominate an existing staff member as the Wellness Champion. The Wellness Champion is the school’s expert on health and wellness and might help facilitate the implementation of schoolwide policies and programs that promote a healthy school. This person should be nominated by the school principal and will be an enthusiastic and dedicated driver of positive change. A Wellness Champion acts as the point of contact between each school and the CPS Office of Student Health and Wellness (OSHW).

Next, with a Wellness Champion leading the way, here’s how other team members can play vital roles:

Principal
Model a healthy lifestyle. Ensure that messages are consistent across all channels of school communication, from the cafeteria to the classroom. Create local school policies that promote health. Reward positive recognition for healthy fundraising and classroom celebrations.

School Nurse
Spread the word about health every day! Remind students about the importance of healthy eating through posters and signage. Communicate with parents and students—via a health section in the school newsletter, for example—about the importance of overall health.

PE Teacher
Introduce the fun and satisfaction of physical activity to students, helping increase their chances of a healthy future and understanding of the connection between physical activity and success in the classroom. Champion and provide training for in-class activities that get students moving.

Parents
Encourage wellness at home and at school, and support teachers in making celebrations and fundraisers a healthy part of the school experience. Send students to school with healthy snacks that prepare them for learning.

Classroom Teachers
Integrate wellness into everyday classroom lessons and manage the classroom through the use of healthy rewards. Teach healthy habits that will last a lifetime.

Dining Manager
Help students understand the facts behind their nutritious school lunch. Encourage students to eat fruits and vegetables by serving those first or helping organize activities around this goal. Collect feedback on school meals to understand student preferences. Communicate with parents about positive changes to the school meals program and instill school pride around wellness.
Students
Encourage wellness in your school. Start a healthy fundraiser and share enthusiasm for healthy lunches and snacks with your peers.

Nonprofit Organizations
Partner with schools. Introduce them to new afterschool programs and curricula. Connect them to outside resources. Ask how you can help.

**Make your own contact list:**

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Healthy Celebrations and Rewards
Celebrations and rewards are a big part of school culture. Help students make nutritious food choices all day long! Beyond regular meals, snacks are sometimes offered during in-class celebrations or as rewards from a teacher. When schools reinforce healthy habits in the classroom, students learn consistent lessons that can last a lifetime.

Why is This Important?

Snacks offered as part of celebrations and rewards are part of a category called “competitive foods”—foods and beverages outside the regular school meal program. (This category also includes foods sold in vending machines, school stores and as part of fundraisers.) Competitive foods matter because they send a strong message about food choices and offer an opportunity to model healthy behavior. Students who receive consistent messages about good eating are better able to put those lessons into practice. Providing students with regular access to unhealthy foods at school undermines school-wide efforts to promote healthy eating. Studies show that students who do not have regular, easy access to unhealthy options at school are more likely to develop healthy eating habits—before, during and after school. A CDC report states that it’s important for students to receive a “strong, consistent message” from adults as well as “access to healthy food and the support of persons around them.” In the fall of 2012, CPS passed a Healthy Snack and Beverage Policy, which establishes nutritional standards for food available to students outside the school lunch program, including a la carte items sold in the cafeteria, vending machines, fundraisers and school stores. This policy is necessary because these “competitive foods” include snacks high in sugar, salt, or fat, and students often will choose these foods instead of the school lunches that adhere to nutritional standards.

Get Started

Learn about your school wellness policy requirements around school celebrations and rewards. The CPS Wellness Policy:

- Prohibits taking away recess, PE or physical activity time as a consequence
- Prohibits the withholding of food as a punishment
- Requires teachers, staff and administration to use creative positive incentives instead of food to reward student behavior
- Recommends offering physical activity as a reward for good behavior
- Each school is now required to limit celebrations where food and beverages of minimal nutritional value are served or sold to two per school year. Schools are expected to ensure all foods sold as part of school fundraisers adhere to the Healthy Snack and Beverage Policy nutrition guidelines.
Try these Quick Tips

Encourage healthy celebrations:

· Focus on fun rather than food: Plan activities and themes to keep kids excited without snacks being the main event.
· Celebrate creatively by setting up craft stations and playing music in the background.
· Have a scavenger hunt for items or information in the classroom or around the school. Have children search for items related to the party theme.
· Have a dance party, such as learning an Irish step dance for St. Patrick’s Day.
· Instead of a party, organize a special community service project. Invite senior citizens to lunch, decorate pillowcases to give to a homeless shelter, or make holiday cards for hospital patients.

Try non-food rewards:

· Buy inexpensive pencils in bulk, saying “Mr./Ms. ___’s All Star!” or another personalized message. Students will love getting them as a reward, and they can be used in class! (Thanks to Shaina Vincent of Ogden International School for this tip.)
· Make leadership a reward. One teacher made each student a shirt that said “School Leader” with each student’s name on the back. Students who had good behavior all week got to wear their shirts on Friday and read to preschoolers in the afternoon. A great way to reward your students while giving them a chance to practice their reading skills!
· Make phone calls home for good behavior. You can make calls home to tell parents about their kids’ great behavior; or consider creating opportunities for children to make calls home telling their parents about their good work. (Thanks to KIPP Ascend Charter School for sharing this tip, which they put in practice every Friday to reward students.)
· Set up a photo recognition board and reward children by displaying their photo on the board.
· Lunch with the teacher! Reward children by inviting them to eat lunch with you. This is a great chance to also set a good example and communicate messages about good nutrition.

Learn from Success Stories

Consider some of the ideas that teachers and school nurses have shared! Many thanks to Phyllis Powell Pelt, RN, MS, ILCSN and the teachers who have shared their great ideas on healthier rewards that still keep kids engaged and excited.

· Try a new kind of birthday cake: Take a watermelon, cut it in half, and stick candles inside instead of using a cake. It’s a fun and healthy way to celebrate!
· Keep it consistent: Healthy changes will be most successful when everyone in the school is ready to do their part in creating a culture of wellness. Share the message in a positive way and celebrate the seemingly small changes that staff are making. For example, office staff can switch out candy jars for stickers or other items; and parents and community members can serve healthy snacks at their meetings in the school.
· Make it fun: How about a fresh fruit tasting, or a dance party for students? As you make healthy changes, be sure to emphasize fun.
Healthy Celebrations and Rewards

Learn from Success Stories

Skinner North Elementary School, Chicago

Skinner North is making changes to take on the challenge! Where did this school find the motivation to meet high standards for food, fitness and nutrition education?

“We want our kids to be healthy,” said principal Ethan Netterstrom. He explained that as educators, he and his staff realize that children’s needs are not only academic but also emotional, social and physical. “If kids only learn to be academically fit, it is not enough. They have to be thoughtful members of society and have active lifestyles.”

Since the school opened in 2009, school staff has felt strongly about rewarding kids with things other than sweets or pizza. Instead, teachers will celebrate children’s birthdays at morning meeting circles and in the classrooms by requesting children to share compliments about the birthday child. Children are able to bring school supplies for goodies for their classmates.

For parent and Wellness Committee Chairperson Hemlata Kumar, it was about making sure that what kids learn at home is reinforced at school and vice versa.

“I want the children to learn about good nutrition at our school so they can understand how to make good choices and learn better. This is about creating long lasting habits that will ensure they will live healthy lives at school as well as at home,” she said.

Hitch Elementary School, Chicago

Principal Debby Reese at Hitch Elementary School explains that she makes it a priority to offer opportunities for all students to develop their mind, body and spirit. Principal Reese explains: “Aristotle knew that the greatest thinkers and learners were those who understood that mind, body, spirit worked together."

As part of this commitment, Hitch School promotes healthy lifestyles by implementing a non-food birthday celebration policy. Instead of having parents bring in cupcakes as a birthday treat for the class, the school asks parents to instead consider visiting their child’s classroom to read a story of their choice or donate a book in honor of the child’s birthday. Parents may also share non-food treats such as stickers or pencils. By focusing on the child rather than the food, the school is fostering healthy habits.

Principal Reese thought she would have an initial uproar from parents but has instead seen a positive response. “I was surprised by the overwhelming support,” she said. Teachers also supported the change, especially because stopping class 25-30 times a year to have a birthday party has a negative impact on student learning time. Teachers explained that having a school-wide no-food policy made it much easier for them to enforce the rule and not be seen as “the mean teacher.”

Teachers have their own lists of recommended ideas for rewards and celebrations. Principal Reese said, “We give parents a list of recommended items that students can have. Stickers, erasers, pencils—we have a whole list of things.” This list helps minimize confusion and maintain consistent messaging about healthy habits.
[Insert date here]

Dear [insert school name] parents, guardians, and staff,

As you might know, our school is part of a nationwide movement to create healthy school environments for our children. We are committed to making continual improvements to [insert school name]'s school culture and curriculum in areas of food and nutrition education, physical activity, and physical education to support each child’s health and achievement. To this end, we are implementing the following guidelines regarding food in classroom celebrations and rewards. At [insert school name], we recognize that a child’s health and wellbeing is the result of a team effort between parents, teachers, and the community, and we greatly appreciate your support with these changes.

Classroom Celebrations and Rewards Guidelines

[insert school name] asks that all classroom celebrations for birthdays, holidays, and student achievement during the regular or extended school day involve activities that make a positive contribution to children’s diets and health with an emphasis on serving fruits and vegetables as the primary snack and water as the primary beverage. We also strongly encourage celebrations with non-food focused activities.

If a snack is to be served it must:

· Feature at least one of the following: fresh fruits and vegetables, a low-fat protein item, low-fat dairy item, or a 100 percent whole-grain food
· Have minimal or no added salt and sugar
· If a beverage is to be served it can either be:
  · Water
  · Up to 8 ounces of 100% fruit or vegetable juice

Please see the following page for ideas on healthy classroom celebrations and suggestions for snacks that meet these guidelines. Do not hesitate to contact [insert contact name] at [email or phone number] should you have any questions or concerns regarding the new school guidelines. Again, we appreciate your support in making [insert school name] a healthy, successful school.

Sincerely,

[insert school principal or classroom teacher name]
Bright Ideas

**Healthy Celebrations**

- At the beginning of the year, have students help create a “birthday menu” of healthy celebration ideas.
- Refreshments should complement the fun, not become the main event, and should be chosen for fun, good, taste and health.
- Celebrate creatively by setting up craft stations and playing music in background. Ask parents to provide the supplies such as clay, craft paper, pencils, markers, paints and stickers.
- For a holiday theme celebration, host a scavenger hunt for items or information related to the theme in the classroom or around the school.
- Let kids bring music and balloons for a class party after a big test or before winter vacation.
- Play Olympics: Have teams pick a country to represent and then compete with academic or physical games.
- For birthdays, children can select a favorite activity or invite a special guest to read a book.

**Healthy Rewards: Alternatives to Food**

**Recognition**

- Recognizing a child’s achievement on the school-wide morning announcements or the school’s website
- A photo recognition board in a prominent location in the school
- A phone call, email or letter sent home to parents or guardians commending the child’s accomplishment

**Tangible Rewards**

- School Supplies: pencils, pens or bookmarks
- Toys/Trinkets: puzzles, playing cards or flashlights
- Sports Equipment and Athletic Gear: frisbees, water bottles or jump ropes

**Privileges**

- Lunch with the teacher or principal
- “No homework” pass
- Reading to a younger class
Healthy Rewards: Food and Beverage Ideas
Ideas that Meet Criteria for Classroom Celebrations and Rewards

Fruit
Can be served whole, cut into pieces or wedges. The recommended daily intake of fruit for children ages 4-13 is 1-1.5 cups. While fresh fruit is preferred when available, frozen, canned, or dried fruit without added sugars can be served.
· Fruit salads with grapes, apples, berries and melon
· Dried fruit trail mixes
· Applesauce
· Fruit-based popsicles
· Party Idea: Make your own fresh fruit kabob or smoothies with fruit, milk/soy milk and ice.

Vegetables
Cut into sticks or bite-sized pieces. The recommended daily intake for vegetables for children ages 4-13 is 1.5-2.5 cups.
· Fresh vegetables with dip (carrots, sugar snap peas, bell pepper with yogurt based dips, guacamole and hummus)
· Veggie Pockets (whole-wheat pita pocket or tortilla, vegetables, and hummus)
· Party idea: Make-your-own salad bar

Whole Grains
Whole grains can be a great snack with nut butter spreads and other healthy dips. The recommended daily intake of grains for children ages 4-13 is 2.5-3 oz.
· Whole grain pretzels and crackers with toppings like low-fat cheese
· Rice cakes made from brown rice
· Popcorn with little or no added salt or butter
· Baked whole grain tortilla chips with salsa or guacamole

Protein
Nuts, seeds, peas and beans are healthy sources of protein and make easy classroom snacks. The recommended daily intake of protein foods for children ages 4-13 is 4-5 oz.
· Bean dips with vegetables or whole-grain crackers
· Trail mix with assorted nuts and seeds
· Party idea: Make-your-own trail mix

Low-Fat Dairy
These products can be switched out for calcium fortified alternatives like soy milk if children are lactose-intolerant. The recommended daily intake of dairy for children ages 4-13 is 2.5-3 cups, depending on age, sex and physical activity level.
· Low-fat cheese stick
· Yogurt: individual servings of low-fat yogurt with moderate or no added sugars (No more than 30 grams of sugar per 8 oz. serving)
· Party idea: Build-your-own parfaits with fruit, yogurt and granola

Healthy Alternatives to Junk Food and Dessert
These items can be swapped in for popular junk food and dessert items such as cakes and cookies.
· Cakes without icing or topped with fruit and reduced fat whipped topping
· Oatmeal raisin cookies
· Fig bars
· Reduced-fat popcorn (light, air-popped popcorn with low salt and little oil)
· Whole grain crackers and cheese cubes

For additional suggestions of healthy school snacks, see the Center for Science in the Public Interest: cspinet.org/nutritionpolicy/healthy_school_snacks.html
Healthy Fundraising
Schools have many options for successfully raising money while keeping school wellness a priority—without relying on sales of unhealthy foods. Learn more about easy ways to hold healthy fundraisers in your school that send consistent, positive messages that wellness really matters.

Why is This Important?
Research shows that fundraisers can make an impression on students and, if they are not in line with wellness goals, can reverse some of the progress being made by school-wide wellness efforts. When schools provide healthy choices for fundraising, they send positive, consistent messages about the importance of good nutrition and physical activity.

Get Started
In the fall of 2012, CPS passed a Healthy Snack and Beverage Policy, which established nutritional standards for food available to students outside the school lunch program, including a la carte items sold in the cafeteria, vending machines, fundraisers and school stores. This policy is necessary because these “competitive foods” include snacks high in sugar, salt or fat, and students often will choose these foods instead of the healthy school lunches that adhere to nutritional standards. The CPS Healthy Snack and Beverage Policy established guidance for CPS schools regarding school fundraisers:

· All CPS non-food fundraisers require approval from the network Chief and all food fundraisers require approval from Nutrition Support Services.
· Schools that implement the sale of non-approved food or beverages will have to forfeit the revenue to the district.

1. Learn about the requirements
Foods sold as fundraisers are also called “competitive foods” because they are outside the regular school meal program. To learn about the requirements for healthy competitive foods that are in line with the CPS Wellness Policy, visit learnwellcps.org. With fundraising, a good rule of thumb is to focus on fun, rather than on food.

2. Create a team
Some people to contact may include the school principal, school dining manager, school nurse, parents and fellow teachers. Make sure to state your case for healthy fundraising. Questions to ask the group include: What does current fundraising look like, and how could it be healthier? What programs do we need to fundraise for and how much do we need to raise? How many fundraisers should we host? How do we determine the success of a fundraiser? (For example, is it measured by dollars raised, student involvement, community involvement?) Brainstorm a list of potential team members, their names, and the ways they can help on the next pages.
# Healthy Fundraising Team

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<th>Category</th>
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3. Crunch numbers and analyze

Fill out the following chart with information from last year's fundraising activities, your current year-to-date figures and projections for the coming year. (There will likely be some parts of the chart that you'll leave blank at this stage in your planning process until you've completed more of this worksheet and can come back to them.) The fundraising sources listed are examples only. Add ones that are relevant to your school. In the expense column for each activity, include materials, staff time and other expenses.

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<th>Fundraising Source</th>
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<th>Last Year's Expense</th>
<th>Current Year's Income</th>
<th>Current Year’s Expense</th>
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<td>Book Fair</td>
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<td>School Photos</td>
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<td>Walk-a-thon</td>
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<td>Product Sales (magazines, wrapping paper)</td>
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4. Analyze previous school fundraising
Interview those who’ve been involved in the school's fundraising efforts in the past. Questions might be:
· How far in advance do you plan your fundraisers?
· How do you decide what fundraisers you will conduct?
· Do you only continue fundraisers historically connected to the school?
· Are they based on a need for money for particular programs?
· Are they based on ideas from the PTA or teachers?
· Do you choose fundraisers that will reinforce school policies?
· For each of the sources of income in the chart from Step 3, note briefly what has worked well to bring in money that you want to do again. What hasn’t worked? How can you improve or modify these strategies to make them work?

5. Choose a fundraiser
See the following pages for ideas to make your fundraiser successful. A good rule of thumb is to focus on fun instead of on food: Plan activities and themes to keep kids excited without food being at the center. Ideas include walk-a-thons, car washes, academic contests and much more.

6. Spread the word
Reach out to parents, teachers, school staff and, of course, students! Work with your team to create a plan about how you will make sure the school community knows about your health-promoting fundraiser. Set realistic goals—but make sure they are high enough to inspire success.

7. Some things to keep in mind:
· All fundraising should be voluntary, safe, and should not distract students from learning.
· Fundraisers should be accountable and transparent and should have a specific goal and a set plan of how the funds will be distributed. Make sure to set clear expectations and outcomes.
· A healthy fundraiser is a great way to spread school pride. Make sure participants know they’re improving wellness as well as raising money.

If using a fundraising company, make sure to select a CPS vendor-approved company. Questions? Contact the Office of Student Health Wellness at studentwellness@cps.edu.
Flower-Grams. Selling student-made “Santa-grams” for Christmas and “Flower-grams” for Mother’s Day are two of the most successful fundraisers. The school also hosts a no-candy Halloween Fall Festival where the eighth graders create different stations with activities and games, such as face painting, hula hooping, bean-bag toss and a scarecrow photo station. Students buy tickets for the different activities or a wristband which will give them unlimited access to all the activities.

Ana Roqué de Duprey Elementary, Chicago

The school invites students’ families to participate in fun reading and math skills-based games that teachers create and families can take home during the school’s “family game night.” Families are asked to pay $3 to participate. The school also hosts book fairs either through a vendor or by asking families to donate old books and inviting students to purchase “new” books for 25 cents each.

Chicago International Charter School Prairie Campus

Students can wear casual clothes instead of their uniforms for the day with a donation of $1. Other non-food fundraisers at this school include rummage sales.

Madero Middle School, Chicago

At Perez fun festivals, the school gym becomes a carnival with games, activities and prizes. Parents create baskets for a raffle.

Manuel Perez Elementary, Chicago

At Westwood’s Reading Challenge Academic Fundraiser, students find five people to pledge $10 for the student to read 15 minutes per day. For every $2,000 raised, the principal pledged to spend an hour on the roof reading to students!

Westwood Elementary, Illinois

Walsh hosts candle sales. Students sell candles for $10, and $5 of the profit goes to the school.

Walsh Elementary, Chicago
Bright Ideas

[Fill in the blank!]-a-thon

From Walk-a-thon to Sled-a-thon or even Math-a-thons, students could get a sponsorship for each lap, sled trip down the hill or math problem solved. For example, students could raise $1 for every lap walked (up to eight laps).

Fun with Digital Photography

Rent a digital photo booth for your next school event or set up a station with a digital camera and different homemade props. Try to find a community photographer volunteer. Charge $2 per session to offset cost (depending on the size of the event) and post photos online.

Cookbook Fundraisers

Create a cookbook of healthy recipes. The school spends about $3 to $5 per book for a basic cookbook. Groups can charge whatever they choose. Typically, books are sold for $10 each.

Student Art

Everyday items (T-shirts, mouse pads, cups and tote bags) can be turned into family keepsakes while helping to raise money for your school. Print students’ artwork on these items and sell them at your next fundraiser or turn classroom art projects into holiday gifts parents can purchase. Projects can be linked to art or curriculum-based activities.

Clean-up Day

Ask for donations for students' work. Create teams of students and adults who offer services (all conducted in public places and/or outside) such as spring yard work, washing windows and cleaning cars. The students and adults donate their time, but the home or business owners pay for the services. Establish a fair rate and make arrangements in advance.

Back-to-School Ideas

Order back-to-school supplies in bulk for discounts. Have parents purchase packages of supplies directly from school—this is convenient for parents, ensures students have correct supplies and raises money for the school.

Do-it-Yourself Fruit Baskets

Ask parents or parent groups to volunteer. Buy fruit and decorative supplies in bulk at large discount stores. Sell baskets or raffle them at the next school event.

Go Green Sales

From selling reusable bags to green cleaning items to energy saving lightbulbs, schools can fundraise and save the earth with items that highlight school spirit or an environmental message.
Suggested Monthly Fundraising Activities

Fundraising ideas for the entire school year! Convene fundraising committees (student or parent) or your School Wellness Council at least monthly to ensure that fundraisers are well-organized, advertised and successful.

**September**
- Back-to-school sale (school logo merchandise, school supplies)
- Start ongoing fundraisers via the school store or donation drives (e.g. annual appeal)

**October**
- Columbus Day
- Halloween
- Walk-a-thon
- Pumpkin sale

**November**
- Election Day
- Veterans Day
- Thanksgiving
- Recycling drive for America Recycles Day (Nov. 15)
- Parent-Teacher Conferences
- Autumn fruit, vegetable, or plant sale

**December**
- Holiday items (Festively packaged fruit or vegetables, wrapping paper, plants, candles, etc.)
- Holiday event (concert, dinner, theater, dance)

**January**
- Martin Luther King, Jr. Day
- Talent show, battle of the bands, board game night, and other indoor events

**February**
- Valentine’s Day flower sale or dance

**March**
- NCAA Basketball Tournament

**April**
- Earth Day
- Seed, plant, or flower sale
- Walk-a-thon
- “Green” fundraiser (e.g., recycling drive, reusable bags) for Earth Day (Apr. 22)

**May**
- Mother’s Day
- Memorial Day
- Fresh fruit or vegetable sale
- School logo merchandise (e.g., “My teenager goes to _____ school”)

**June**
- Graduation (flower sales, etc.)
- Father’s Day
[Insert date here]

Dear [insert school name] parents, guardians, and staff,

As a member of our school community, many of you are already aware that we have regular, annual fundraisers that provide vital funds for school programs. These fundraisers help to support new school initiatives, after-school activities, field trips, and athletic programs that enhance students’ learning and achievement. In the past some fundraisers have relied on the sale of unhealthy foods like candy and baked goods, and we now recognize that this practice sends the wrong message to children and goes against our commitment to creating a healthy school environment at [insert school name]. To continue to build a school culture that models healthy behaviors, we are implementing the following guidelines regarding school fundraising. Importantly, healthy-food and non-food fundraisers can still generate the income necessary for school programming while promoting health and wellness. At [insert school name], we recognize that a child’s health and wellbeing is the result of a team effort between parents, teachers, and the community, and we greatly appreciate your support with these changes.

Healthy School Fundraising Guidelines
All school-sponsored fundraisers at [insert school name] that occur during or outside the regular school day will involve the sale of food items that either make a positive contribution to children’s health and are aligned with healthy nutrition standards, or use non-food fundraising methods. Examples of non-food fundraisers include walk-a-thons, product sales (wrapping paper, greeting cards, magazine subscriptions), and book fairs. Fundraisers to be avoided include activities like bake sales, label redemption programs, and candy and cookie sales. [Insert school name] will support this policy with the necessary resources and assistance to adapt current fundraising practices.

Please see attached pages on ideas for additional healthy fundraising ideas. These are simply some suggestions, and we welcome your input and creativity. Do not hesitate to contact [insert contact name] at [email or phone number] should you have any questions or concerns regarding the new school guidelines. Again, we appreciate your support in making [insert school name] a healthy, successful school.

Sincerely,

[Insert school principal or classroom teacher name]
Ideas for Healthy Fundraising at [Insert School Name]

Non-Food Fundraising

- Create a school cookbook. Ask families and staff to submit their favorite healthy recipe to compile in a cookbook and involve students with illustration and writing. Sell the finished product to parents and community members. Ask local businesses to join in the effort and feature the cookbook in their store for a period of time. If a professional look is preferred, personalized cookbooks can be printed through companies like Cookbook Publishers, Inc. (cookbookpublishers.com) and G & R Publishing (gandrpublishing.com).
- Sell flower-grams. Sell flowers and cards on holidays such as Valentine's Day and Mother’s Day for students and staff to give to friends or family. This is a great way to acknowledge a holiday without candy or treat sales.
- Hold a [fill in the blank]-a-thon. From Bowl-a-thons and Math-a-thons many activities can be turned into school fundraisers. Students can get sponsorship for each lap walked, bowling frame completed, or math problem solved.
- Host a book fair. Holding a book fair at school can accomplish the two important goals of fundraising and literacy promotion at the same time. Hosting schools receive a percentage of the profit from all book sales. See www.scholastic.com/bookfairs for more information.

Healthy Food Fundraising

- Sell do-it-yourself fruit baskets. Buy assorted fruit, dried fruit, nuts, and decorative supplies in bulk at large discount stores. Ask student groups and parent volunteers to assemble baskets. Sell the fruit baskets around holidays or raffle them off at school events.
- Switch out the bake sale for a smoothie sale. Instead of the traditional school bake sale, try selling smoothies during or after the school day. This does not require many materials: a few donated blenders, cups, and smoothie ingredients. Include a variety of fresh or frozen fruits and low-fat and low-sugar yogurts for children to design their own creations.
- Create a school “farm stand.” During the fall months, highlight seasonal produce like pumpkins, gourds, and squash. Students can bring these home for cooking or decorating.
- Sell culinary herbs and spice sets. Herbs and spice sets make great gifts for the holidays and year round while promoting cooking and healthy family meals.
Garden-Based Learning
School gardens allow students to participate in hands-on activities. School gardens can strengthen academic and social skills as well as allow students to develop life skills in areas such as nutrition, leadership and decision-making. Through a school garden, students can learn about and practice healthy behaviors in an exciting, hands-on way. Chicago Public Schools supports more than 400 schools with a school garden through various initiatives.

Why is This Important?
Studies link green space with better health and wellness—and even improved grades. Additionally, a host of research shows that green space makes neighborhoods safer and communities healthier. When secondary outcomes are considered, such as more creative play, physical activity and community engagement, the list of benefits grows.

Time spent in nature has also been linked to decreased stress, mitigated attention deficit disorders, better eyesight, less asthma and improved Body Mass Index. People are happier in nature; sometimes just looking at nature can reduce stress.

Try These Quick Tips
- Decide what type of garden would work with your school environment (container, raised beds, modular garden beds)
- Establish a garden team that includes teachers, students, parents, administration, kitchen staff and partners
- Consider reaching out to local businesses for donations to offset the cost of establishing a garden or search for grants
- Visit other school gardens to get ideas

Best Practices
- Recommended touchpoints for students is two to three times per month
- Use authentic learning experiences connected to the school garden
- Connect multiple core subjects to garden learning such as science and math
School Gardens at Chicago Public Schools

CPS School Garden Policy Recommendations
The Office of Student Health and Wellness (OSHW) recommends that all school gardens are well-maintained and fully integrated into the classroom and school culture. Additionally, schools should:

- Review the CPS Food Safety requirements if you plan to serve garden produce in the dining center
- Integrate your garden into every grade level and content area to create as many learning opportunities for your garden as possible
- Maintain a garden team of at least three staff members to coordinate the upkeep of the garden
- Use your garden for community engagement
- Ensure staff attends at least two school garden-related professional development opportunities annually
- Allocate resources for garden upkeep on an annual basis
- Weave the garden into the school culture

Learn more about resources CPS offers at cps.edu/OSHW/Documents/GrowWELL_Toolkit.pdf

CPS Resources
The CPS Office of Student Health and Wellness has compiled a variety of resources to help your school provide access to school gardens:

- CPS LearnWELL Toolkit. With practical tips and ideas. Available at cps.edu/oshw/Pages/LearnWell.aspx.
- CPS Eat What You Grow! This food safety program provides guidance that certifies schools to eat garden produce with their students. To learn more and register for future trainings, contact Student Wellness at studentwellness@cps.edu.
- The Green Teacher Network is a partner of CPS and offers access to teacher-training sessions and special events focused on the use of plant-based learning. Visit its website for more information chicagobotanic.org/education/teacher_programs/gtn

Gardens and Meeting Wellness Policy Requirements
Effective use of the school garden can help schools become LearnWELL and align with CPS wellness policies through:

- Nutrition Education (incorporating into any garden activity)
- Outdoor Learning (teaching a lesson outdoors)
- School Food (becoming an Eat What You Grow school)
Additional Ideas

Celebrations and Fundraising
Hold planting and harvest celebrations and raise money by growing and selling seedlings.

Movement Minutes
Take your students to the garden for at least one movement break a month (weather permitting) to move around and maintain the garden—all at the same time!

Nutrition Education
The garden is a nature place for nutrition education. You can regularly incorporate nutrition education into any garden activities.

Outdoor Play and Learning
Teach in the garden, enjoy recess in the garden—the garden is part of a larger outdoor space that should be explored.

Parent Engagement
Have at least one non-staff volunteer on the garden team.

Physical Education
Discuss the muscles and movements required for turning soil, getting near the ground, weeding and other garden activities.

Rewards
Cultivate the garden as a space seen as a reward to be in.

School Food
Eat from the garden! Become Eat What You Grow certified and serve garden produce in the dining center or for snack.

School Leadership
Connect your garden team with your wellness team.

Garden-Based Learning Classroom Book List

<table>
<thead>
<tr>
<th>Book Title</th>
<th>Age Range</th>
<th>Author</th>
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<tbody>
<tr>
<td>How Did That Get In My Lunchbox?: The Story of Food</td>
<td>5-8 yrs</td>
<td>Chris Butterworth</td>
</tr>
<tr>
<td>The Omnivore’s Dilemma: Young Readers Edition</td>
<td>11 yrs +</td>
<td>Michael Pollan</td>
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<td>Tops and Bottoms</td>
<td>4-7 yrs</td>
<td>Janet Stevens</td>
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<td>Gardening Lab for Kids: 52 Fun Experiments to Learn, Grow, Harvest, Make, Play, and Enjoy Your Garden</td>
<td>5 - 12 years</td>
<td>Renata Brown</td>
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<td>From Seed to Plant</td>
<td>4 - 8 years</td>
<td>Gail Gibbons</td>
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<td>The Curious Garden</td>
<td>4 - 7 years</td>
<td>Peter Brown</td>
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<td>Carrots Grow Underground</td>
<td>4-8 yrs</td>
<td>Mari Schuh</td>
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<tr>
<td>Compost Stew: An A to Z Recipe for the Earth</td>
<td>4-8 yrs</td>
<td>Mary McKenna Siddals</td>
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<td>The Summer My Father Was Ten</td>
<td>5-9 yrs</td>
<td>Pat Brisson</td>
</tr>
<tr>
<td>Wiggle and Waggle</td>
<td>5-8 yrs</td>
<td>Caroline Arnold</td>
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Nutrition Education
Good nutrition can go far beyond the cafeteria—into the classroom! Nutrition education can be a separate curriculum or it can be woven into existing standards-based curricula.

Why is This Important?
By teaching the value of healthy eating, nutrition education helps kids grow healthy and stay healthy as adults.

Get Started
The CPS Wellness Policy provides the following requirements for schools:

- All students K-8 must receive nutrition education at all grade levels
- Middle schools must provide nutrition education in at least two grade levels
- High schools must provide nutrition education in two required courses

CPS encourages schools to use resources provided by the USDA and encourages schools to integrate nutrition into other school subjects, including math, science and language arts. Messages about nutrition should be consistent across classrooms and cafeterias.

Teachers can incorporate nutrition education into math, science and language lessons. Additional resources may consist of handouts or worksheets, posters throughout the room or class discussions and presentations.

Cafeterias can display posters, featuring a “food of the month” or “menu item of the week” and conduct taste tests with students to help expand their palates.

School gardens are another way students can learn about nutrition. Fruits and vegetables grown in the school garden can be served in the cafeteria, for taste testing, or even for parents! Serving food grown in school gardens requires training and district approval.

Try these Quick Tips

- Make school lunch a teachable moment.
- Praise children for making healthy choices.
- Challenge students to make their plates nutritionally balanced.
- Eat lunch with your students and encourage them to try new fruits and vegetables.
- Engage students in creating visual representations such as graphs of the number and types of healthy foods eaten during lunch.
- Decorate classrooms, hallways, cafeterias and other common spaces with healthy eating messages. Invite your students to help create these materials.
- Partner with local nonprofit organizations to provide in-school or after-school opportunities for nutrition education. For example, some organizations can help you get started with a school garden and others can help teachers integrate lessons about healthy food.
- Integrate nutrition education into academic lesson plans. Read about how food is grown, learn about healthy food in different cultures or swap out a flash card featuring French fries for one that features fresh fruit. Work with the school principal to have classroom teachers weave lessons into daily subjects about specific food-related behaviors such as portion size and mindless eating. For example, have students learn about different food groups in science class and then have them create their own healthy meal using MyPlate resources.
- Think about ways you can extend nutrition education into the community. Start a healthy cooking club, partner with local organizations that can provide dietary advice, or host an annual health fair.
Learn from Success Stories

Calmeca School, Chicago

Calmeca School in Chicago took part in Chef in the Classroom, an initiative inspired by Michelle Obama’s call for chefs to get involved in schools. Through this program, a local chef visited Calmeca School and shared a fun veggie-tasting session with students. Since the chef’s visit, students have embraced the fresh fruits and veggies they tasted that day. The school has been inspired to form a nutrition education partnership with a local community program to reinforce students' newfound appreciation for healthy eating. A special event can have a long-lasting effect!

Manuel Perez Elementary, Chicago

Manuel Perez Elementary in Chicago extends opportunities for healthy living to students and their families. Through its Bilingual Parent Resource Center, Perez is able to utilize one of its greatest strengths and resources: its engaged parents and community members. Ongoing health, fitness and nutrition workshops presented by the Bilingual Parent Resource Center give parents and community members the knowledge, resources and ability to support Perez in creating a school culture that recognizes the value of student health and its connection to academic success.
Connect to Resources

The following resources have been reviewed and approved by the Health and Wellness Materials Review Board convened by the Office of Student Health and Wellness at Chicago Public Schools. Please note: This list of resources is continually updated as more nutrition education resources and providers undergo the review and approval process set forth by CPS. To learn more, please contact the Office of Student Health and Wellness at studentwellness@cps.edu.

Angelic Organics Learning Center
learngrowconnect.org
Martha Boyd / 312-243-5151 / martha@learngrowconnect.org
Empowers people to create sustainable communities of soils, plants, animals and people through educational, creative and experiential programs. The Learning Center, a nonprofit organization, is the educational partner to Angelic Organics, a vibrant biodynamic community supported farm.

American Cancer Society
cancer.org
Tanya Kimber / 312-279-7251 / tanya.kimber@cancer.org
The American Cancer Society is the nationwide, community-based, voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives and diminishing suffering from cancer, through research, education, advocacy and service.

Chicago Partnership for Health Promotion
uic-cphp.org
Daylan Dufelmeier / 312-355-3659 / daylan@uic.edu
CPHP, founded in 2002, is a unit of the UIC Great Cities Neighborhoods Initiative representing a network of community based interventions designed to improve nutrition and reduce disparities in outcomes associated with nutritional diseases. CPHP provides high quality, age, gender and culturally tailored nutrition education in a variety of venues across the city.

Common Threads
commonthreads.org
312-329-2501 / classes@commonthreads.org
Common Threads is a national nonprofit organization that is committed to educating communities about healthy food choices through the power of cooking. For 10 years, we have been teaching school-based nutrition and health education programs to under-served communities.

Cooking Matters Illinois
ilmaternal.org/cookingsmatters
Lilah Handler / 312-491-8161 / lhandler@everthrivel.org
Share Our Strength's Cooking Matters program empowers families at risk of hunger with the skills, knowledge and confidence to make healthy and affordable meals. Through hands-on classes taught by volunteer culinary and nutrition experts, course participants learn how to select nutritious and low-cost ingredients and prepare them in ways that provide the best nourishment possible to their families. Cooking Matters play a critical role in Share Our Strength's No Kid Hungry Campaign, a national effort to end childhood hunger in America by 2015.
The Gardeneers
gardeneers.org
Adam Zmick / 847-421-7074/ adam@gardeneers.org

Gardeneers is an exciting new school gardening program that brings professionals into your school to work with students to start and maintain a school garden. Gardeneers seeks to close the achievement gap by improving student nutrition and engaging students in social emotional learning.

Grow Your Giggle™
growyourgiggle.com or viviledish.com
Lori Lynes / 815-630-4552 / lynes@viviledish.com

Grow Your Giggle is a wellness education program for teachers of elementary-aged children that can be used to complement any nutrition education program being executed in schools. The program helps children establish healthy relationships with food by identifying “sometimes,” “anytime” and “everyday” foods while teaching moderation and portion control. Children learn how to make healthy choices by sharing a daily adventure with Miss Vivi LeDish™! Teachers can utilize information in the daily program or they may have the flexibility to customize their own lesson plans.

The Kid’s Table
kids-table.com
Elena Marre / 773-235-COOK (2665) / elena@kids-table.com

The school programs are designed to promote healthy eating by teaching age-appropriate culinary skills, exposing kids ages 4-18 to a variety of wholesome ingredients and encouraging good food choices. Students get to participate in every part of the process – from chopping, grating and rolling, to enjoying the fruits of their labor. With lots of smelling, touching and tasting along the way, even the pickiest students are tempted by their creations!

The Kitchen [Community]
thekitchencommunity.org
Steve Clark / 773.339.7642 / steve@thekitchencommunity.org

Established in 2011 as the philanthropic arm of The Kitchen restaurants to connect kids to nutritious food by creating Learning Gardens in schools and community organizations across America. Jen Lewin Studios designed the Learning Garden as an easy, affordable, scalable school garden solution; it is an attractive outdoor classroom and experiential play space with edible vegetables. Learning Gardens are designed to be places kids want to play and teachers want to teach, thereby helping to decrease childhood obesity, improve academic performance, and strengthen communities.

Midwest Dairy Council®
midwestdairy.com
Sandra Brown / 773-994-0531 / sbrown@midwestdairy.com

Midwest Dairy Council, an affiliate of National Dairy Council, is dedicated to dairy nutrition research and education, and is committed to child health and wellness through our collaborative program, Fuel Up to Play 60, an in-school nutrition and physical activity program, designed to engage and empower youth to take action for their own health by implementing long-term, positive changes for themselves and their schools.
Purple Asparagus
purpleasparagus.com
773-991-1920 / info@purpleasparagus.com

Purple Asparagus educates children, families and the community about eating that’s good for the body and the planet. We bring delicious, nutritious hands-on adventures to schools, community organizations and farmers’ markets throughout Chicagoland.

Seven Generations Ahead
sevengenerationsahead.org
708-660-9909 / act@sevengenerationsahead.org

Founded in 2001, Seven Generations Ahead’s mission is to promote the development of ecologically sustainable and healthy communities. SGA works with local government, community and private sector leaders to help communities make the changes they need to create a healthy and sustainable future. Through community-wide sustainability planning and implementation, educational conferences and consulting, and school-based zero waste and farm to school programming and consulting, SGA is a catalyst for local community solutions to global environmental issues.
Physical Activity
Physical activity during the school day helps students focus better in the classroom, increases social skills and encourages an active lifestyle. Activity in the classroom is also a great way to get students’ minds moving. During class time, teachers can integrate physical activity into lessons.

Why is This Important?

Physically active students are better prepared for school and for life. Research shows that physical activity benefits children's cognitive health. It affects perception, memory, judgment, focus and reasoning as well as scores on verbal and mathematics tests. In fact, the Institute of Medicine recommends that all children participate in a minimum of 30 minutes of physical activity during the school day. The new CPS Wellness Policy states that schools should discourage extended periods (two hours or more) of time when a student is not physically active and that schools should provide all students with additional daily opportunities for moderate to vigorous physical activity before, during and after school in addition to recess and PE.

Students are more successful in learning new information when they’re able to actively participate. Using movement in lessons, or sensory-based learning, helps students retain and understand information.

Physical activity helps improve:

- Motor skills
- Academic performance
- Academic readiness
- Learning
- Cognition (mental processes of perception, memory, judgment and reasoning)
- Scores on verbal and mathematics tests
- IQ
- Concentration
- Perceptual skills (identification, spatial awareness, visual-sensory integration)

Get Started

Meet with school staff and have the school principal agree to encourage teachers to incorporate 10 to 15 minutes of daily physical activity in the classroom by following these guidelines:

- Choose developmentally appropriate and safe activities, modifying for students with disabilities.
- Portray physical activity in a positive manner and never as a punishment.
- Be engaged and model healthy behavior.
- PE teachers and classroom teachers should work together to come up with safe, developmentally appropriate breaks of physical activity.
- Be consistent and have a set plan for your in-class physical activity breaks.
Try These Quick Tips

· Practice spelling words while getting some exercise! Have students spell words aloud, doing one jumping jack for each letter. This works with reciting the alphabet, too.

· Review any subject in a fun, active way! Have students form a circle, with one holding a playground ball. Ask a review question. The student will have to answer correctly before tossing the ball to a classmate of their choice.

· Turn a true-false quiz into an activity! Line students up opposite you. State a fact you have studied. If students think the fact is true, they will take one step forward; if they think it is false, they will take one step back. Alternatively, you could have students do jumping jacks or hop on one foot to indicate true/false or yes/no.

· Incorporate walking breaks! Take your class for a walk while discussing with students what they learned during the previous lesson.

· Transition with activity! After long, sedentary periods, transition to a new lesson with an activity break.

· Incorporate exercise! Use a weekly calendar with different morning and afternoon exercises for each day.

Learn from Success Stories

Rufus M. Hitch Elementary School, Chicago: Yoga

A first-grade teacher incorporates yoga into the classroom. For example, the teacher leads students in yoga stretches while they are waiting in line.

McCormick Elementary, Chicago: Active Math

One kindergarten teacher found countless ways to bring activity and healthy messages into the classroom. The teacher leads students through their math exercise by using movements. Students happily jumped through different movements to match different sets of numbers, exercising their brains and their bodies at the same time. The teacher explained that students are more open to doing work and finishing their tasks after they are physically active and found that students have more energy and get through the problems more quickly.
Physical Education at Chicago Public Schools

PE Policy
In 2017, CPS adopted a PE Policy that states schools shall offer physical education programming in accordance with CPS Physical Education Policy of 150 of PE per week. The updated Wellness Policy also requires the integration of physical activity on a daily basis, instead of a weekly basis, and a provision to increase opportunities for physical activity.

CPS Resources
The CPS Office of Student Health and Wellness has compiled a variety of resources to help your school provide daily quality PE.

Resources include:

- CPS PE Toolkit. This toolkit provides practical tips and ideas. Available in the CPS Knowledge Center.

- CPS Physical Education Scope and Sequence. This guide illustrates the range of topics and skills to be taught and in what sequence for grades pre-K-12. The Scope and Sequence can be modified to meet the needs of each CPS school’s student body and personnel as well as issues with facilities and equipment. Available in the CPS Knowledge Center.

- Physical Education Section on the Knowledge Center. Visit the PE page on the Knowledge Center to download the Physical Education Policy Manual and access short webinars, best practices and communications templates. Teachers can log into the CPS knowledge center at kc.cps.edu for more information.

- Specialized assistance can be provided to individual instructors and/or administrators in an effort to improve the quality of PE. Please contact the PE Help Desk at physicaleducation@cps.edu or 773-553-3560.

Beyond PE
Schools can also develop a Comprehensive School Physical Activity Program (CSPAP), a roadmap for increasing students’ physical activity before, during and after school. The CSPAP approach recommends five components of school-based physical activity: Physical Education, Physical Activity During School, Physical Activity Before and After School, Staff Involvement and Family and Community Involvement. Learn more at letsmove schools.org.
CONNECT TO RESOURCES

Chicago Organizations + Resources

The following resources have been reviewed and approved by the Health and Wellness Materials Review Board convened by the Office of Health and Wellness at Chicago Public Schools. Please note; this list of resources is constantly being updated as more nutrition education resources and providers undergo the review and approval process set forth by CPS. The Office of Student Health and Wellness aims to remove health-related barriers to learning such that students may succeed in college and career. To learn more, please contact the Office of Student Health and Wellness at studentwellness@cps.edu.

Active Transportation Alliance
activetrans.org
312-427-3325 / admin@activetrans.org

Education plays a vital role in the mission of the Active Transportation Alliance. It aims to give teachers and parents the tools needed to educate children about biking and walking, and also to guide communities to implement smarter school policies and safe routes to school. Active Transportation can provide technical assistance to schools on a variety of topics and can advocate for policy changes that promote walkable and bikeable schools.

America Scores
americascores.org/affiliates/chicago
312-666-0496 / chicago@americascores.org

Founded in 2000, America SCORES Chicago inspires urban youth to lead healthy lives, be engaged students, and have the confidence and character to make a difference in the world. America SCORES partners with urban schools to provide a high quality, team-based program that integrates soccer, poetry, and service learning. Its innovative approach improves students health, academic achievement and civic engagement.

Calm Classroom
calmclassroom.com
Jai Luster / 847-748-7482 / jai@calmclassroom.com

Luster Learning Institute provides its school-wide “Calm Classroom” program training and year-round support services and materials to CPS. Teachers are trained to facilitate short breathing, stretching, focusing and relaxation techniques in the classroom, three to four times daily. Students and teachers develop the habit of using these self-reflective, self-regulatory techniques when needed in school and beyond. Student outcomes include: improved academic success, focus and stress management, and reductions in overall code of conduct violations and misbehavior.

Chicago Safe Routes Ambassadors
Cody McChane / 312-744-3019 / cody.mcchane@activetrans.org
Chicago’s Safe Routes Ambassadors are Chicago’s pedestrian and bicycle safety outreach team. Ambassadors meet with thousands of Chicago students each year, teaching kids about safe walking and biking behavior, talking about the benefits of active transportation, and helping communities implement Safe Routes to School activities. The Safe Routes Ambassadors are a free city service through the Chicago Department of Transportation, and are available to visit any elementary school in Chicago.

Chicago Run

chicagorun.org
773-961-8470 / info@chicagorun.org

Chicago Run works with schools on an individual basis in order to help them increase the amount of physical activity their students receive on a weekly basis. Chicago Run uses physical fitness, nutrition education, and digital learning as a means to get students excited about their over-all health and wellness, as well as provide them with the opportunity to learn about surrounding communities and to take pride in their own!

Dancing with Class

dancingwithclass.org
Margot Toppen / 773-635-3000 / margot@dancingwithclass.com

Dancing with Class introduces students to different forms of ballroom/partner dance. Programs bring together dance, cultural learning and character education into one seamless package.

Enlace

enlacechicago.org
Simone Alexander / 773-703-9272 / salexander@enlacechicago.org

Enlace Chicago is dedicated to making a positive difference in the lives of the residents of the Little Village Community by fostering a physically safe and healthy environment in which to live and by championing opportunities for educational advancement and economic development.

Girls in the Game

girlsinthegame.org
Allison Liefer / 312-633-4263 / aliefer@girlsinthegame.org

Girls in the Game provides and promotes sports and fitness opportunities, nutrition and health education, and leadership development to enhance the overall health and well-being of girls.

Girls on the Run

girlsontherun.org
Kristen Kainer-Turner / 773-342-1250 / kristen@gotrchicago.org
Girls on the Run is a transformational physical activity based positive youth development program for girls in 3rd-8th grade. It teaches life skills through dynamic, interactive lessons and running games. The program culminates with the girls being physically and emotionally prepared to complete a celebratory 5k running event. The goal of the program is to unleash confidence through accomplishment while establishing a lifetime appreciation of health and fitness.

JumpBunch
jumpbunch.com
Ali Anjum / 312-835-7724 / aanjum@jumpbunch.com
JumpBunch provides an experienced coach and necessary equipment to make it easy for schools to add structured sports and fitness to their curriculum or to round out after-care programs. The curriculum introduces the rules and skills through hands-on exercises, so kids begin playing and improving right away. The goals are to help make every student comfortable trying new sports, to give them a basic understanding of popular sports and to help them appreciate the fun and rewards of regular physical activity.

Mindful Practices
mindfulpracticesyoga.com
708-408-0393 / admin@mindfulpracticesyoga.com
Mindful Practices offers innovative professional development, after-school and recess programming in yoga and wellness strategies. Mindful Practices works with schools across the country to honor the needs of the whole child through mindful classroom management practices that bring relaxation, movement and breath work to the classroom. Programming offerings for early elementary, elementary, middle school and high school include Hip-Hop Yoga, Cool Corps, Kindness Lab and Cool Down Club, which is a specialized program for students with aggressive behavior and/or special needs. All programs are offered as options for recess, after school or embedded day programs. Mindful Practices also offers effective and engaging professional development workshops for faculty, staff and parents.

Playworks Chicago
illinois.playworks.org
Colleen Harvey / 312-324-0280 / charvey@playworks.org
Playworks is a national nonprofi t organization that transforms schools by providing play and physical activity at recess and throughout the school day. Through on-site direct service and trainer-led professional development workshops, Playworks restores valuable teaching time, reduces bullying, increases physical activity and improves the school and learning environment. Playworks teaches children to resolve their own conflicts that arise at recess and carry over to the classroom, improving school climate both on and off the playground. Playworks helps transform recess into a safe, fun and inclusive time that gets students active and engaged so they can return to the classroom focused and ready to learn.

Stretch-n-Grow
stretchngrownorth.com
773-486-3540 / sngrow@yahoo.com
Stretch-n-Grow is a fun fitness and nutrition program for children ages 2-13. Kids work up a sweat to upbeat music as they learn about the importance of living a healthy lifestyle. The Stretch-n-Grow Program covers health topics including proper nutrition, hygiene, sleep and more.

Urban Initiatives
urbaninitiatives.org
April Lillstrom / 312-715-1763 / info@urbaninitiatives.org
Urban Initiatives offers sports-based youth development programming including a health and education soccer program, structured recess program and a four-week soccer camp. The mission of Urban Initiatives is to motivate Chicago’s children to improve their academic performance, physical fitness, health, and character through collaborative programs.

Action for Healthy Kids
actionforhealthykids.org
Heidi Knoblock / 312-878-2712 / hknoblock@actionforhealthykids.org
Action for Healthy Kids addresses childhood undernourishment, obesity and prevention by working with schools to help kids learn to eat right and be active every day. This focus is because of the unique position and influence that schools have on children and their families, in addition to their responsibility to provide nutrition and physical education and their many opportunities to promote healthy eating and active living.

Alliance for a Healthier Generation
schools.healthiergeneration.org
Erin Rasler / 773-857-1276 / erin.rasler@healthiergeneration.org
Alliance’s Healthy Schools Program takes a comprehensive approach to helping schools create healthier environments by working with them to improve access to healthier foods; increase physical activity opportunities before, during and after school; enhance nutrition education; and establish school employee wellness programs.

University of Illinois Extension
web.extension.illinois.edu/cook
Michele Crawford / 773-768-7779 / mcrawfrd@illinois.edu
University of Illinois Extension Cook County is an outreach effort of the University of Illinois at Urbana-Champaign. Illinois Nutrition Education Program (INEP) staff work with a variety of community organizations to ensure that low-income families have access to information on good nutrition and physical activity. INEP staff provide classes that teach participants how to use their food dollars wisely, select healthy foods for their families, prepare and store food safely, and balance food intake with physical activity. INEP offers nutrition education for pre-K through 5th grade youth and adults.

Westside Health Authority
The Health Promotions Program at Westside Health Authority (WHA) focuses on seven health priorities to enhance the overall health and well-being of the community: Active Lifestyles, Nutrition Education and Healthy Eating, Breast Health, Sexual Health, Health Literacy, Diabetes and School Health. The Move “N” Crunch program is a model fitness and nutrition program for schools. The “move” component is led by a partner organization, Chicago Run, which implements free running programs with the help of on-site school staff. The “crunch” component is led by WHA and includes 12 nutrition classes focused on how a specific fruit or vegetable is grown, why it benefits our bodies, and how it tastes.

McCormick YMCA
ymcachicago.org/mccormicktribune
Adriana Stanovici / astanovici@ymcachicago.org

The McCormick Tribune YMCA’s Active Green Space seeks to impact health and wellness with a focus on childhood obesity and diabetes in the Logan Square, Humboldt Park and Hermosa neighborhoods of Chicago. The Active Green Space has created a “hybrid space”, combining a physical activity area, an outdoor classroom, a community garden and a green energy education component. The Active Green Space project is critical to positively impacting health and wellness now and in the future.

YMCA of Metropolitan Chicago
ymcachicago.org
312-932-1200

The YMCA of Metropolitan Chicago is an inclusive, charitable association, founded on Christian principles and dedicated to building strong kids, strong families and strong communities through programs that develop spirit, mind and body. Initiatives include: nutrition education, physical activity/fitness, health education, family life, diabetes, character development; values-based leadership development.

National and Online Resources

Take 10!
take10.net
Try out a searchable database of classroom-based physical activity lessons for K-5.

Active Academics
activeacademics.org
Gain practical ideas for integrating physical activity in K-5 math, reading/language arts, health/nutrition, and physical education classes.
Activity Bursts for the Classroom
davidkatzmd.com/abcforfitness.aspx
Elementary schools can learn how to restructure physical activity into multiple, brief episodes throughout the day without taking away valuable time for classroom instruction.

Energizers
letsgo.org/toolkits
Find classroom-based physical activities for grades K-8 that integrate physical activity with academic concepts.

Winter Kids Outdoor Learning Curriculum
winterkids.org
Discover lessons aligned with national education standards that are interdisciplinary and in a variety of subjects for grades K-12. The site features an adapted component for disabled children.
LESSON INTRODUCTION
This lesson focuses on the importance of fruits and vegetables. Students will learn about the nutrients in fruits and vegetables, the health benefits of eating fruits and vegetables, and what it means to paint your plate with color. In 3rd grade, students will learn to classify nutrients by color.

LESSON OBJECTIVES
• Fruits and vegetables also contain fiber that will help me stay full and nutrients that will help me grow strong. (HE 1.5.3)
• Eating plenty of fruits and vegetables is good for my heart, bones, may protect against cancer, and help me maintain a healthy weight. (HE 1.5.3)
• Fruits and vegetables are one of the food groups and I should eat 2-3 cups of vegetables each day and 1.5 cups of fruit each day. (HE 1.5.2)
• Painting my plate with color means trying to get 3 or more colors of fruits, vegetables, lean protein, or whole grains each meal. This is an easy way to get a variety of nutrients.
• Almost all fresh, frozen, and canned vegetables are go foods, unless they have fat, sugar, or salt added.
• A good chef keeps their area clean to stay safe and organized!

NATIONAL HEALTH EDUCATION STANDARDS
• HE 1.5.3 Describe the benefits of eating plenty of fruits and vegetables.
• HE 1.5.2 Identify the amount of food from each food group that a child needs daily.
• HE 1.5.4 Explain the importance of eating a variety of foods from all the food groups.
• HE 1.5.1 Name the food groups and variety of nutritious food choices for each food group.
• HE 2.5.3 Identify relevant influences of community on food choices and other eating practices and behaviors.

HEALTH BASED OUTCOMES
• HBO 1. Eat the appropriate numbers of servings from each food group everyday.
• HBO 2. Eat a variety of foods from within each food group everyday.
• HBO 3. Eat an abundance of fruits and vegetables everyday.
• HBO 12. Follow an eating plan for healthy growth and development.
• HBO 13. Support others to eat healthy.

MATERIALS
• Equipment for the recipes
• Copies/Projection of the selected recipe
• Ingredients for the selected recipe
• Copies of the Kitchen Times
• Fruit and Vegetable Memory Cards for each group of 5 (found in the back of this book)
• Game Sheet for each group of 5
• Recording Sheet for each student

PREPARATION
• Select a recipe from www.commonbytes.org
• Prepare recipe ingredients
• Have students wash their hands
• Print enough sets of Fruit and Vegetable Memory cards so that students can play in groups of 5 or less
ABOUT COMMON THREADS
Founded in 2003 in Chicago, Common Threads was created to bring health and wellness to children, families and communities through cooking and nutrition education. By integrating preventative health programs into schools districts and community organizations, Common Threads not only helps combat the rising number of diet-related diseases, but also cultivate a culture that embraces a healthier lifestyle and celebrates diversity through food.

Our organization envisions a community of learners that embraces healthy cooking, healthy eating, and healthy living as both a life choice and human right.

TEACHING NOTES
Two version of the Recording Sheet have been provided. The blank copy requires more writing of the students and the copy with check boxes will allow students to move through the game more quickly.


RECIPE: WATERMELON FETA SALAD
Servings: 5 (or 10 tastings)

Ingredients:
- 1 lb. watermelon, cubed
- 1 sprig fresh mint, chiffonade
- 1 oz. feta cheese, cubed or crumbled

Directions:
1. Remove the rind of the watermelon. Dice the watermelon. Mince the mint.
2. Gently mix the watermelon, mint, and feta together in a mixing bowl.
3. Serve and enjoy!
INTRODUCTION
10 minutes
1. Welcome students to the Small Bites lesson and spend some time discussing some introductory questions:
   - What did we learn in the last two lessons?
   - What are your favorite fruits and vegetables?
   - What fruits and vegetables would you like to try one day?
2. Share this lesson’s Kitchen Times with the class and have students read aloud, in small groups, or individually. Check for understanding by reviewing (see Key Understandings):
   - Why are fruits and vegetables an important part of a healthy diet?
   - How many cups of vegetables should you eat each day?
   - How many cups of fruit should you eat each day?
   - What does it mean to “paint your plate with color”?
   - Are fruits and vegetables go, slow or whoa foods?

ACTIVITY
15 minutes
3. Students will play an adapted form of the card game Memory to learn about the various fruits and vegetables. Review how the game is played with students and demonstrate a sample round for the class if needed.
4. Divide the students into groups of 4-5 and give each group a set of cards, game sheet, and each student a recording sheet. If time allows, students can play multiple times.
5. As a class, discuss observations the students have from the game. Discussion questions could include:
   - Which foods seemed to have the most nutrition?
   - Which foods are good for our eyes? Bones? Etc.
   - Which of these foods have you tried?
   - Which of these foods would you like to try?

CLASSROOM COOKING
20 minutes
6. Use the recommended recipe or select a recipe from www.commobyes.org that features a fruit or vegetable.
7. The focus of today’s cooking activity should be on working clean. Discuss the importance of cleanliness with the students, this includes hand washing, preventing food from touching dirty surfaces (like desks!), and not touching other people’s foods with your hands. Review etiquette and manners the students should practice when it comes time to eat. All students should wait until after the class has said the Creed and everyone has been served before eating. Students should also practice a “no thank you” bite before deciding if they like a recipe or not.
8. Review the recipe with the students and discuss where each ingredient would fit on the Chef’s Plate. After students have all washed their hands they may begin cooking. Have students divide up the tasks amongst their group members. For example, some members can be putting the ingredients on a skewer while others begin measuring and assembling the dipping sauce ingredients.
9. After the recipe is made, have the class say the Common Threads Creed. Students can then equally distribute food among their group members and enjoy together. Have students discuss the recipe and answer the following table topic: What influence does your community have on your food choices and eating behaviors? (HE 2.5.3)

10. Have students share out key parts of their table topic discussion and review the Key Understandings for this lesson. Students should clean-up their stations as needed.

**EXTENSION LESSONS**

Use the suggestions below to extend the lesson and deepen the connection to core content standards.

**COMMON CORE STATE STANDARDS**

3.MD.2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

W.3.8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

**NEXT GENERATION SCIENCE STANDARDS**

3.LS1-1. Develop a model to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

3-LS1-1. See the corresponding garden lesson.

**RECOMMENDED RECIPES**

Find these recipes and more at www.commonbytes.org.

Bell Pepper Tasting  Vegetable Skewers
Fruit Skewers  Tomato Poppers
Fruit Two Ways  Make your Own Guacamole
Fresh Fruit Parfait  Watermelon and Feta Salad
The world’s most popular fruit is the tomato. Many other foods often thought of as vegetables are actually fruits, like cucumbers and olives. Make a habit of trying new vegetables and fruits! It is a great way to add more color and variety into your diet. Spend some time each week washing and cutting up fresh vegetables and fruits so they are an easy go-to snack.

DO YOU REALLY NEED VEGETABLES AND FRUITS?

Yes! There’s a reason that an entire half of the chef’s plate is fruits and vegetables. We are recommended to eat 2-3 cups of veggies, and 1-2 cups of fruit each day. The more vegetables and fruits you can eat the better! Veggies and fruits come in all shapes and sizes from fresh to canned to frozen, and these are all Go Foods as long as they don’t contain added sugar, salt, or fats.

Why Are Vegetables and Fruits Good For Us?

Fiber
Although fiber can’t be digested by humans, it is actually one of the best helpers for digestion. As fiber passes through the body, it helps to speed up the digestive system and helps us feel fuller for longer since it doesn’t break down. Fiber can be found in almost all the plants we eat like vegetables, fruits, and whole grains.

Vitamins and Minerals
Fruits and vegetables are packed full of nutrients like vitamins and minerals. This is what keeps everything from our bones all the way to our skin in top shape.

- **Manganese** develops healthy bones, and can even help repair broken bones.
- **Vitamin A** keeps your eyes and skin healthy and protects against infections.
- **Vitamin C** boosts your immune system which keeps us from getting sick, helps heal cuts and wounds, and keeps your teeth and gums healthy.
- **Vitamin K** keeps your heart healthy.

Paint Your Plate with Color: a healthy diet should include 3-4 different colored vegetables and fruits each day.
Chronic Disease
In addition to healing wounds and fighting short term illnesses, vegetables and fruits also fight long term illnesses, also known as chronic diseases. Research shows us that people who have more fruits and vegetables in their diets are likely to have reduced risks of chronic diseases such as diabetes, heart disease, high blood pressure and some types of cancer.

Hydration
Did you know that vegetables and fruits are made of mostly water? An added bonus of eating lots of fruits and vegetables is that they can help keep you hydrated. Watermelon, for example, takes after its name and is over 90% water! Berries, bell peppers, zucchini, broccoli, cauliflower, and citrus fruits are other great examples of veggies and fruits with lots of water.

Healthy Weight
Because vegetables and fruits have lots of fiber and water, they tend to be filling and very low in calories. This helps us to maintain a healthy weight and get all the nutrients we need without added salts, sugars and fats.

Leafy greens are some of the most nutrient dense vegetables, but they can taste slightly bitter. Do you agree with the scale below?

Relative Bitterness

www.commonthreads.org
FRUIT AND VEGETABLE MEMORY - GAME SHEET

GAME SUPPLIES
• 20 Fruit and Vegetable Cards
• 20 Paint Your Plate with Color Cards
• 4-5 Players
• 1 Recording Sheet per player

SETTING UP THE GAME
1. Divide the cards into two piles, one pile of the Fruit and Vegetable cards and one pile of the Paint Your Plate with Color cards.
2. Arrange the Fruit and Vegetable cards in 4 rows of 5 cards with the pictures facing down.
3. Place all the Paint Your Plate with Color cards in one pile, color side down.

THE TURN
4. The first player takes their turn by flipping the top Paint Your Plate with Color card over and selects one Fruit or Vegetable card that they believe matches the color on their Paint Your Plate with Color card.
   • If the colors match, the player shares information about that fruit or vegetable and then records the fruit or vegetable name, nutrients, and health benefits on their Recording Sheet in the correct color row. The player keeps the Fruit or Vegetable card and places the Paint Your Plate with Color card in the discard pile.
   • If the colors do not match, the player flips the Fruit or Vegetable card back over and places the Paint Your Plate with Color card in the discard pile.
   • If a player selects a color they already have, place the Paint Your Plate with Color card in the discard pile and their turn is over. They do not flip over a Fruit or Vegetable card.
5. The following player takes their turn and play continues around the circle.
6. If the Paint Your Plate with Color cards run out, shuffle the discard pile and add those cards to the draw pile.

WINNING THE GAME
7. The object of the game is to record one fruit or vegetable of each color on the Recording Sheet, the first player to do this wins.
FRUIT AND VEGETABLE MEMORY - RECORDING SHEET

Use this as your recording sheet to play Fruit and Vegetable Color Memory. Refer to the Game Sheet for rules and set-up. Remember, a chef always shows good sportsmanship!

<table>
<thead>
<tr>
<th>Color</th>
<th>Fruit or Vegetable Name</th>
<th>Nutrients</th>
<th>Health Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purple or Blue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange or Yellow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Use this as your recording sheet to play Fruit and Vegetable Color Memory. Refer to the Game Sheet for rules and set-up. Remember, a chef always shows good sportsmanship!

<table>
<thead>
<tr>
<th>Color</th>
<th>Fruit or Vegetable Name</th>
<th>Nutrients Check the boxes</th>
<th>Health Benefits Check the boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purple or Blue</strong></td>
<td></td>
<td>Manganese, Protein, Riboflavin, Folate</td>
<td>Aiding digestion, Helping with muscle repair &amp; growth, Keeping the heart healthy, Boosting your immune system, Helping your metabolism make energy, Aiding in cell development, Developing healthy bones</td>
</tr>
<tr>
<td><strong>Green</strong></td>
<td></td>
<td>Manganese, Protein, Riboflavin, Folate</td>
<td>Aiding digestion, Helping with muscle repair &amp; growth, Keeping the heart healthy, Boosting your immune system, Helping your metabolism make energy, Aiding in cell development, Developing healthy bones</td>
</tr>
<tr>
<td><strong>Orange or Yellow</strong></td>
<td></td>
<td>Manganese, Protein, Riboflavin, Folate</td>
<td>Aiding digestion, Helping with muscle repair &amp; growth, Keeping the heart healthy, Boosting your immune system, Helping your metabolism make energy, Aiding in cell development, Developing healthy bones</td>
</tr>
<tr>
<td><strong>Red</strong></td>
<td></td>
<td>Manganese, Protein, Riboflavin, Folate</td>
<td>Aiding digestion, Helping with muscle repair &amp; growth, Keeping the heart healthy, Boosting your immune system, Helping your metabolism make energy, Aiding in cell development, Developing healthy bones</td>
</tr>
<tr>
<td><strong>White</strong></td>
<td></td>
<td>Manganese, Protein, Riboflavin, Folate</td>
<td>Aiding digestion, Helping with muscle repair &amp; growth, Keeping the heart healthy, Boosting your immune system, Helping your metabolism make energy, Aiding in cell development, Developing healthy bones</td>
</tr>
</tbody>
</table>
HEALTHY FUNDRAISING
Healthy food or non-food fundraisers enable schools to send consistent, positive health messages, reinforce classroom education and contribute to student health by supporting a healthy school environment as well as promoting healthy choices. Fundraisers that involve either healthy food choices or non-food items, such as hosting a walk-a-thon versus a candy sale, can yield significant fundraising revenue and build a sense of community. By engaging in Healthy Fundraising, schools can further their mission of creating environments with students who are prepared to learn.

The CPS Healthy Snack and Beverage Policy fundraising guidelines for CPS schools:
» Schools should avoid food fundraisers and focus on non-food items to promote a healthy school environment.
» Schools may not sell food in competition with service of the National School Breakfast or National School Lunch Programs.
» Schools who have not adopted a Healthy Celebration and Fundraising Plan will be expected to ensure all foods sold as part of school fundraisers adhere to the Healthy Snack and Beverage Policy nutrition guidelines.
» Schools are expected to ensure all food sales on school grounds and during the school day comply with USDA and CPS nutrition guidelines.
» The United States Department of Agriculture (USDA) defines the school day as 12:00 am until 30 minutes after the last bell.

Healthy Fundraising will help your school on the path to become LearnWELL!

What is LearnWELL? LearnWELL is an initiative to support schools in aligning with the Chicago Public Schools wellness policies, which promote improved health and academic performance of all students through healthier school environments.

Healthy fundraisers can raise as much money as traditional food fundraisers while transforming the school into a healthier environment.

HEALTHY FUNDRAISING IDEAS:
» Light Bulb Sale: Schools have sold light bulbs to parents as a fundraiser. Selling items that everyone needs is a brilliant idea!
» Walk-a-thons and “fun runs”: Increasingly popular, walk-a-thons and 5Ks promote physical activity and can raise significant funds. (K-12)
» Bike Raffle: Purchase a bike or have one donated, and sell tickets to raffle it off. (K-12)
» Flower/Plant Sale: Sell plants that are in season for holidays, such as poinsettias for Christmas and other winter holidays or roses for Valentine’s Day. (K-12)
» Dress Down Day: Encourage students to donate a small amount to wear jeans or to be out of uniform for a day. Some schools have asked students to donate $0.50 to dress down. (K-12)
» Book Fair: Selling popular books is a great way to raise money and promote literacy. (K-12)
» School Dance and Dance-a-thons: Many students have utilized dances as a fundraiser. This is a great way to promote physical activity within a safe environment. You can charge and entry fee for the School Dance or have students collect pledges or donation for the Dance-a-thon. (5-12)
» Healthy Movie or Game Night: Invite families and students out to watch educational, popular movies or play board games and charge a couple of dollars for admission. (K-12)
» Staff versus Students Sporting Events: Very popular with students and staff. It is a great way to get physically active and have friendly competition outside of the classroom. (K-12)
» Design T-Shirts and Buttons: Invest in a silk-screen or button maker to create printed t-shirts or buttons with your school logo. Have students design the print and promote items to their teachers, friends, and family. (K-12) (Oriental Trading Vendor # 37398, Classroom Direct Vendor # 30078, Varsity Spirit Fashions Vendor # 43811)
IDEAS FROM OTHER SCHOOL DISTRICTS

» **Community Flea Market:** Have parents and the community sell items from their homes they may no longer need and all proceeds can go back to the school. (K-12)

» **Bracelet/Jewelry Sale:** Students can make jewelry or it can be purchased and then sold to raise funds for the school. (K-12)

» **Sale of school-related promotional items:** Sales of T-shirts, sweatshirts, pens, pencils, book covers, water bottles, and other items branded with the school logo can help build school spirit and raise funds. (K-12) (Oriental Trading Vendor # 37398, Classroom Direct Vendor # 30078, Varsity Spirit Fashions Vendor # 43811)

» **Gift Wrap Sales:** Ask gift wrap companies for catalogs that do not include candy and other low-nutrition foods in addition to wrapping paper. (K-12)

» **Singing Grams:** Students can order a ‘singing gram’ to be delivered to a teacher or other student. Based on the order, members of the school choir or music class perform a short skit or jingle for the recipient. (K-12)

» **Recycling fundraisers:** Recycling companies purchase used items, such as clothing, printer cartridges, and cell phones, from schools. (K-12)

» **Grocery Store Fundraisers:** Grocery stores give a percentage of community members’ purchases to a designated local school. (K-12)

» **Auctions:** Can be very profitable, though also labor intensive, and ideally include several big-ticket items donated by local businesses. (K-12)

» **Battle of the Bands:** Student bands compete for title of Best Band based on audience applause. Charge a cover for audience members to watch and to participate in judging.

ADDITIONAL RESOURCES:
http://www.cspinet.org/schoolfundraising.pdf
https://schools.healthiergeneration.org/_asset/r588vm/08-459_AltimateFundraisingIdeas.pdf

For more information about healthy fundraising please contact studentwellness@cps.edu and visit learnwellcps.org.
PLANTING ACTIVITY
Growing Sweet Potatoes

OBJECTIVES:
1. Children are able to describe how a sweet potato grows from a slip into a plant.
2. Children describe resources needed to grow sweet potatoes.
3. Children help to start sweet potato slips.

WHAT YOU MIGHT NEED:
Fresh sweet potatoes, unwashed
Sharp knife
Wooden craft sticks or toothpicks (three-four per sweet potato)
Clear glasses or narrow-mouthed or wide-mouthed quart size jars
(make sure the jars are large enough for the sweet potatoes to be suspended inside)

WHAT YOU MIGHT DO:

PART 1: HOW DO SWEET POTATOES GROW?
1. Gather the children in circle time to learn about how sweet potatoes grow. Pass around sweet potatoes for the children to feel and smell.
2. Show children a photo of a sprouting sweet potato, such as the one to the right. Explain that sweet potatoes grow from slips. Point to the green sprouts in the photo: these are the slips.
3. Explain that people plan slips in rows of soil. Sweet potatoes grow under the soil, while their leaves grow on top of the soil. Can the children think of other plants that grow this way? (e.g. beets, carrots, potatoes).
4. Explain that water and sun help the plant to grow healthy and strong.
5. Explain that today the children will help start sweet potato slips in glasses/jars. Explain that the sweet potatoes will grow in the jars the way they would outside in the soil. We can watch them sprout and grow!

PART 2: SPROUTING A SWEET POTATO
1. Depending on how many sweet potatoes you have, give each child a sweet potato, or divide children into groups to work with a teacher or classroom aid and one sweet potato.
2. If using wooden craft sticks, teachers should make three ½ inch horizontal slits evenly spaced around the middle of the potato.
3. Help the children push the wooden craft sticks into each slit (at least ½ inch apart). Or, help the children push three to four toothpicks into the sweet potato, forming a circle around the middle of the potato.
4. With children, put sweet potatoes in jars. Toothpicks or wooden sticks should hold the top half of the sweet potato out of the jar.
5. Help the children fill the glass or jar with enough water to almost cover the bottom half of the sweet potato.
6. Place the jars in a warm location. A sunny windowsill is a good spot.
7. Watch over the next two to three weeks as the potato begins to grow roots at the bottom, and then leaves at the top of the potato. Refill the glasses/jars with water every few days.
8. After a couple of months, plant the sweet potato 3-4 inches deep in a pot or hanging pot filled with potting soil. Keep soil moist, and train the vines as desired.

* Lesson adapted from “Sweet Potato Hill” in Grow it, Try it, Like It, USDA, September, 2009
SENSORY EXPLORATION
Investigating Seeds

OBJECTIVES:
1. Children explore seeds for different kinds of apple and learn that seeds come in different shapes and sizes.
2. Children describe the feel, smell, and color of apples and apple seeds.
3. Children use scientific inquiry skills to predict, observe, describe and compare.

WHAT YOU MIGHT NEED:
3-4 kinds of apples
Spoons
Bowls for seeds

WHAT YOU MIGHT DO:
• In a large group, introduce the activity: “Today we will be exploring apples!”
• Take out the 3-4 kinds of apples and name them for the children.
• Have the children describe the apple, and ask the children what they think is inside of the fruit. Explain that the apple does have seeds because it is a fruit, and all fruit have seeds!
• Choose an apple and ask the children to predict the number and color of the seeds inside. Record their answers on a piece of paper.
• Wash apple and cut in half. (Children can help wash apple; teachers cut apple in half, being careful to stabilize the apple so it doesn’t roll.)
• Show the children the inside of the apple. If cut horizontally through the core, you can see a star!
• Now count the seeds and compare with predictions.
• Ask children to describe the color, texture, smell of the apple and of the seeds.
• Use other questions to direct children’s explorations, like:
  • What colors are the apples?
  • How does the apple feel? (Smooth, bumpy, hard...)
PLANTING ACTIVITY
Sprouting Beans

OBJECTIVES:
1. Children join an experiment to sprout beans
2. Children measure sprouts as they grow
3. Children are able to describe how beans grow (the beans go underground, and sprouts shoot above ground to become bean plants)

WHAT YOU MIGHT NEED:
Zip-up plastic bags (one for each student, or for each group!)
Paper towels
Dried beans (3 or 4 for each bag) – Lima beans work great.

WHAT YOU MIGHT DO:
• Explain to children that the class will be doing an experiment to grow bean sprouts.
• Teachers can “jump start” the sprouting process by soaking dried beans overnight and rinsing.
• Children soak a paper towel in water (they should be moist, not dripping) and line the bottom of a baggie with the towel.
• Children place a few Lima beans in each baggie, making sure that they can touch the moist towel.
• Place baggies near a window, or tape to the glass. If paper towels seem dry after a day or two, re-moisten with a spray bottle, or take paper towels out and resoak.
• Beans should begin sprouting in a day or two – see how long sprouts get! You can measure sprouts every day, and record how much they grow.
Learning Garden Tour K-2

Key Understandings
• Students will participate in a sensory walk to encourage observation and listen skills
• Students will be able to identify their five senses
• Students will interact with the Learning Garden including plants and soil
• Students will be excited to further explore the Learning Garden

Next Generation Science Standards
• K.SL.1: Use observations to describe patterns of what plants and animals (including humans) need to survive.
• 2.LS.4.1: Make observations of plants and animals to compare the diversity of life in different habitats.

Common Core – Math
• K.CC.4: Understand the relationship between numbers and quantities; connect counting to cardinality.

Common Core – Language Arts
• K.SL.6: Speak audibly and express thoughts, feelings, and ideas clearly.
• 1.SL.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
• 1.SL.6: Produce complete sentences when appropriate to task and situation.
• 1.SL.4: Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
• 2.SL.1: Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

Materials and Preparation
• Familiarize yourself with the Learning Garden and what is growing
• Familiarize yourself with the basics of what plants need to grow LAWN (light, air, water, nutrients)
• Identify plants, textures, sounds, etc. that will engage with the student’s senses

Teacher Background
In order to survive and thrive, plants, just like humans, have basic needs that must be met. All plants need food, water, a place to live, and optimal temperature to grow and reproduce. These needs can be summarized by the acronym LAWN, light, air, water, and nutrients.

Introduction (5 minutes)
Invite students to gather together in the Learning Garden. Ask them the following questions.

What is nature?

What does it mean to observe?

What types of things might we find on a walk around our garden?
Explain that today we are going to our senses to explore the Learning Garden.

Review the 5 senses.

Review any additional rules to the Learning Garden. Query students about known bee/wasp sting allergies before going into the field.

**Garden Activity (15 minutes)**

**SEE:** Walk with your group and surround one garden bed. Ask students to silently explore what is in front of them using their eyes for 15 seconds. Review the following questions and encourage hand raising:
1. Who can tell me what colors we see in the garden?
2. How many plants do we see growing in the garden?
3. What are some ideas of what is growing in front of us?

**HEAR:** Walk to the next bed and circle around the bed. Ask students to silently explore what is in front of them using their ears (with their eyes closed) for 15 seconds. Review the following questions and encourage hand raising:
1. Who can tell me something loud that they heard?
2. Who can tell me something quiet that they heard?
3. What would be some good sounds we would like to hear in our garden? (Bees, birds, wind, etc.).

**FEEL:** Walk to the next bed and circle around this bed. Ask your students what it means to be gentle and have them gently touch 3 things in front of them (plants, soil, garden bed, etc.). Review the following questions and encourage hand raising:
1. Who felt something soft?
2. Who felt something rough?
3. Who can tell me something else they felt?

**SMELL:** Walk to your herb garden. Teach your students how to rub the leaf and smell the scent on their fingers. Have your students very gently rub the leaves of 3 plants in front of them. Review the following questions and encourage hand raising:
1. Who smelled something sweet?
2. Who smelled something strong?
3. Can someone explain what they smelled?
**Conclusion (5 minutes)**

To finish up, create a circle in an open area away from the Learning Garden.

Recap with students that they all used their eyes to see, nose to smell, fingers to feel, and ears to listen.

Ask students: What is the 5th senses that we did not use in the garden today?

Discuss with the students why we will not be using our taste sense today. Students from time to time will be invited to taste things from the Learning Garden, but students should never taste or eat anything from the Learning Garden without their teacher’s permission.

Ask students: What are you looking forward to eating from our garden?
Learning Garden Tour Grades 3-5

Key Understandings:
• Students will become familiar with Learning Garden vocabulary
• Students will be able to identify what plants need to survive
• Students will be able to demonstrate how to properly water the Learning Garden

Common Core – Language Arts
• 3.SL.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building
• 4.SL.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others’ ideas and expressing their own clearly.
• 5.SL.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.

Materials and Preparation:
• Cups for Little Raincloud watering,
• Bucket or tub filled with water
• Plants labeled.
• Research four plants you want to highlight during the tour
• Familiarize yourself with the basics of what plants need to grow LAWN (light, air, water, nutrients)
• Familiarize yourself with the irrigation system
• Familiarize yourself with the Little Raincloud watering method (see below)

Introduction (5 minutes)
Gather in the Learning Garden and form a circle and discuss the following questions:

What do plants need to grow? LAWN (light, air, water, nutrients)

Pick up a small handful of soil. What is in the soil to help the plants grow big and strong? Nutrients, worms, and other helpful organisms.

What are these white boxes that the soil is in? These are called garden beds.

Where do our plants get the water? Rain, but mostly, water from the hose. Walk or point to the hose spigot.

Garden Activity (20 minutes)
Let the students know that you will now be taking them on a Learning Garden tour to identify what is growing. The tour will end with watering demonstration and activity.

Slowly walk around the garden and highlight four plants, say their names loudly and clearly as you point them and pause. Have students repeat back as they follow you around the garden.
Ask students if they have ever eaten any of these fruits or veggies before. If students have eaten these fruits and vegetables before ask them to describe what dish(es) they were found in.

Explain irrigation system. Perforated tubing, drip, etc.

Demonstrate and perform with all students the Little Raincloud method of watering. Once you have shown the method have students perform the task.

**Conclusion (5 minutes)**

Review what plants need to thrive

Go over the 4 plants that you identified

Emphasize the importance of watering our garden

**Little Raincloud Activity:**

1. Fill the large containers with water and position them around the garden.
2. Have students gather around a garden bed, then demonstrate the technique to them (see below)
3. Ask students to line up behind the buckets and hand out cups to the first few students in line.
4. Have students fill the cup with water and move to a spot in the garden that needs water
5. Instruct them to water the seeds and seedlings gently
6. Remind the students to avoid disrupting seeds by splashing forcefully or creating puddle

**Little Raincloud Technique:**

1. Hold a cup of water in one hand.
2. Place the other hand with the palm facing up towards the sky and fingers loosely cupped about 6-8 inches above the surface of the garden.
3. Pour the cup of water slowly into the palm of the other hand, letting the water gently drizzle through the fingers onto the soil in a manner that mimics gentle rain drops.
4. Move hands together back and forth over the garden to direct water to the dry soil.
Got Veggies?

a youth garden-based nutrition education curriculum
For more information about this publication, contact:

Community GroundWorks
Comm Community GroundWorks at Troy Gardens
3601 Memorial Drive, Suite 4
Madison, WI 53704-1573
(608) 240-0409
www.communitygroundworks.org/what-we-do/youth-grow-local

Wisconsin
Wisconsin Department of Health Services
Nutrition, Physical Activity & Obesity Program
P.O. Box 2659
Madison, WI 53701-2659
(608) 267-9194
http://www.dhs.wisconsin.gov/physical-activity/index.htm

Thank you to the following organizations for their collaboration on this project:

Wisconsin Department of Public Instruction
REAP School District Group
Extension
Wisconsin Partnership Program
School of Medicine and Public Health

Funding for this project was provided by the University of Wisconsin-Madison School of Medicine and Public Health from the Wisconsin Partnership Program 2009 The Board of Regents of the University of Wisconsin System

This publication is also supported by Cooperative Agreement Number 5U58DP001494-03 from the Centers for Disease Control and Prevention (CDC). Its content is solely the responsibility of the authors and does not necessarily represent the official views of the CDC.
The Color Harvest

A Comparative Tasting Lesson

Lesson Overview

This comparative harvesting, cooking, and eating activity is a fun way to familiarize students with a variety of fruits and vegetables using color as the distinguishing characteristic. Eating a variety of colors is important as this gives our bodies a wide range of valuable nutrients—like fiber, folate, potassium, and vitamins A and C. For this lesson, you will want to harvest an assortment of seasonal foods from your garden and compare their colors and other characteristics. The lesson is suited for the garden or the classroom and if you don’t have enough food in the garden you can get a colorful variety of fruits and vegetables at a local farmers’ market, farm stand, or grocery store. Students will learn how eating different colors of foods makes us healthy in different ways. They are encouraged to use specific vocabulary to describe color variations between vegetables and fruits. This lesson can be adapted for students of all ages. See some suggestions for different age groups on page 12.

Objectives

Students will:

1. Taste and identify a variety of fruits and vegetables
   (Nutrition Ed C.4.2, F.4.2)

2. Understand that some plants are sources of food
   (Ag Ed D.4.1; Nutrition Ed F.4.3)

3. Develop descriptive vocabulary for specific characteristics of food
   (Long Arts D.4.1, D.4.2; Nutrition Ed F.4.2)

4. Collect and analyze data – see Review and Vote (Math E.4.1, E.4.3)
Materials

Food:
- Different varieties of vegetables and fruits that represent a spectrum of colors from your garden or local market (e.g., orange: carrots, sweet potatoes, butternut squash, pumpkin; purple: grapes, eggplant, kohlrabi; red: radishes, tomatoes, red peppers, strawberries, raspberries, apples, watermelon; yellow: carrots, corn, potatoes, summer squash; green: collard greens, asparagus, kale, broccoli, peas, zucchini, celery, spinach, cucumbers; white: cauliflower, white potatoes; blue: blueberries).

Supplies:
- Book: Growing Vegetable Soup by Lois Ehlert or other book to stimulate discussion about growing and eating a variety of vegetables and fruits from your garden. For more book suggestions, consult the Booklists on page 58 in the Resources section.
- Knife
- Cutting board
- Plates
- Word Bank (included at end of lesson)
- Tasting Chart (included at end of lesson)

Preparation

1. Prior to lesson, determine which vegetables and fruits you will need to harvest or purchase to demonstrate the variety of colors we eat. Consult the list of suggested vegetables and fruits under the Food heading in the Materials section above. For more ideas, visit Harvest of the Month at www.harvestofthemonth.com or choosemyplate.gov for lists of different fruits and vegetables. For vegetables, visit: http://choosemyplate.gov/foods-groups/vegetables.html. For fruits, visit: http://choosemyplate.gov/foods-groups/fruits.html.

2. Get Growing Vegetable Soup by Lois Ehlert or similar book to stimulate discussion about growing and eating a variety of vegetables and fruits from your garden. For more book suggestions, consult the Booklists on page 58 in the Resources section.
3. Rinse vegetables and fruits before slicing. If possible, slice immediately before tasting to preserve freshness. Avoid putting food in the refrigerator, as it dulls the flavor and changes the texture.

4. Write the name of each vegetable or fruit on a display board or poster to record student descriptions (refer to Tasting Chart at end of lesson).

5. Post Word Bank with adjectives to guide students' sensory observations (included at end of lesson).

Procedure

Introduction: Gather students for a discussion or a read-aloud. Use Growing Vegetable Soup by Lois Ehlert or similar book to stimulate discussion about growing and eating a variety of vegetables and fruits from your garden.

You may choose to use some of the following questions to guide your discussion:

1. Where does food come from?

2. Who has a garden or knows someone with a garden? What do you grow?

3. Who has been to a farm? What did you see there?

4. Can you think of some vegetables that are grown in a garden or on a farm?

5. Can you think of some fruits that are grown in a garden or on a farm?

6. Who has tasted any of these fruits or vegetables before?

7. Which fruits do you like to eat as a snack?

8. Which vegetables do you like to eat as a snack?

9. Do you grow any of these vegetables or fruits with your family?

10. Can you think of a fruit or vegetable that comes in more than one color? For example, tomatoes come in almost every color as well as in many shapes and sizes.

11. What colors and shapes of tomatoes have you seen?
12. How do these different vegetables and fruits help us grow? Why are they good for us to eat? Answer: Fruits and vegetables are good for our bodies, as they are packed with nutrients like vitamins and minerals. For older students, you could explain that fruits and vegetables contain many nutrients, including vitamin A and C, potassium, and dietary fiber. There are also some special fruits and vegetables, called the “super green and super orange.” These dark green and orange vegetables are important to eat often because they contain extra amounts of vitamins and minerals. Can you guess which fruits and vegetables growing in your garden are green or orange superheroes? Answer: Super green: bok choy, broccoli, collard greens, mustard greens, romaine lettuce, spinach, kale, watercress, turnip greens, mesclun, and dark green leafy lettuce. Super orange: acorn squash, pumpkin, carrots, sweet potatoes, butternut squash, and Hubbard squash.

13. Do you know how many fruits and vegetables you should be eating each day? Answer: The amount we should eat depends on if we are a boy or a girl, how much activity we get each day, and how old we are. Have children try the Fruit and Veggie Calculator at http://www.cdc.gov/nutrition/everyone/fruitsvegetables/howmany.html or visit www.fruitsandveggiesmorematters.org for information on how many fruits and vegetables kids should be eating daily. As their teacher, how many fruits and vegetables should you be eating? Compare the recommended amounts for adults and kids.

Following the introduction, review proper hand washing procedures and discuss why they are important. Have students wash their hands. Prepare selected fruits and vegetables for tasting.

Observation: Write names of selected fruits and vegetables on the display board or poster paper, or for older students, hand out Tasting Charts (see example on page 13). Explain to students that they will be acting as investigators and will be using their senses to observe, describe, and compare different fruits and vegetables. Before tasting, pass around each vegetable or fruit so students can observe the appearance, texture, scent, etc.
Tasting: Give each student a slice of vegetable or fruit. Encourage them to taste it. Tell students that you don't expect everyone to like it, but it is important to try new vegetables and fruits because they may develop a taste for them over time. Have them observe and describe it using words from the Word Bank. Encourage students to use their own words, which can be added to the Word Bank for future sensory observation activities. Record student descriptions on the display board or have them write them on their Tasting Chart. Repeat these steps with each different vegetable or fruit. Encourage your students to use specific and descriptive vocabulary.

Review and Vote: Briefly review and compare vegetable and fruit descriptions. Have students vote for their favorite variety. This could be an opportunity for a math connection. Count the votes and create a graph or chart to represent the results. Discuss voting results and reasons why students chose one fruit or vegetable over others.

Clean-up: Have students help with clean-up and wash their hands. If possible, vegetable and fruit scraps can go to a compost pile or worm bin.

Individualized to Age Groups

For Younger Children (K to 2nd grade): During observations have students draw a picture of one of the vegetable or fruit varieties. Or cut vegetable shapes out of paper and write their descriptive words on the vegetable. Another fun activity is to have each student offer one descriptive word and combine them to make a collective poem about a selected vegetable or fruit.

For Older Children (3rd to 5th grade): Use the attached Tasting Chart for students to record their own observations. Students may choose adjectives from the Word Bank or use their own describing words. You may also have students write a paragraph or poem describing their favorite vegetable or fruit. Cut fruit or vegetable shapes out of paper and have students write their poems on them. Glue all the poems to one large piece of paper or poster board.

Lesson Variation: Comparative Heirloom Vegetable or Fruit Tasting: Hone your students' taste buds and observation skills by repeating this lesson with heirloom varieties of just one vegetable or fruit. For example, harvest or purchase four different heirloom varieties of tomatoes or apples. Heirloom varieties of certain vegetables and fruits—such as tomatoes and apples—vary greatly in appearance, texture, and flavor, making them well suited for comparison.
Dirt Made Our Lunch

Lesson Overview

This lesson is designed to teach students about the connection between soil and food. The central activity, Deconstructing a Cheeseburger, asks students to help trace ingredients back to the soil, showing how we depend on healthy soil in order to eat. Many of the nutrients in soil come from decomposition of dead plants and other organic matter. Plants absorb these nutrients, and in turn, our bodies absorb them when we eat plants. We refer to this as the nutrient cycle. The Lunch Makes Our Dirt activity helps students understand how food scraps and plant matter break down into rich soil.

Objectives

Students will:

1. Trace foods from origin to table (Ag Ed D.4.1; Nutrition Ed B.4.4; Science F.4.4)
2. Describe the connection between healthy soil and healthy food (Ag Ed D.4.1; Science F.4.2, F.4.4)
3. Understand that people need food in order to be healthy, have energy, and grow (Nutrition Ed A.4.3)
4. Determine the difference between plant and animal food sources (Nutrition Ed F.4.3)
5. Identify the basic food groups and give examples from each (Nutrition Ed F.4.4)

Materials

Food:

- Dill, cucumbers, mustard seed, peppercorns, vinegar, water and salt.
  See Kids' Garden Refrigerator Pickles recipe listed in the Tasting activity on page 17.

Supplies:

- Photos or drawings that illustrate how common cheeseburger ingredients can be traced back to the soil (e.g., bun, wheat, soil. See Deconstructing a Cheeseburger activity on page 16 for full list of images needed).
- Garden journals or paper
- Pens/pencils
- Display board
- Plates
- Napkins
- Cutting boards
- Bowl
- Knives
- 2 quart-sized Mason jars or similar sized plastic containers with lids

Preparation

1. Familiarize yourself with "Dirt Made My Lunch," a fun and educational song by "Solar" Steve Van Zandt of the Banana Slug String Band. To watch a video of the Banana Slug String Band singing "Dirt Made My Lunch," go to www.youtube.com/watch?v=MuqP9gCz564. To watch youth gardeners from Troy Gardens in Madison, Wisconsin singing this song, go to www.youtube.com/watch?v=ZriwCC8D2Uk&feature=youtube_gdata. You can order songbooks and CDs of many great educational garden and nature songs, including "Dirt Made My Lunch," from the Banana Slug String Band at www.bananaslugslingstringband.com.

2. Get photos or drawings that illustrate how common cheeseburger ingredients can be traced back to the soil (e.g., bun, wheat, soil. See Deconstructing a Cheeseburger activity for full list of images needed).

3. Collect pens or pencils and make or purchase garden journals for the Lunch Makes Our Dirt activity. See Keeping a Garden Journal on page 38 in the À La Carte section for garden journal ideas.

4. Harvest or purchase — and wash — food for Kids' Garden Refrigerator Pickles recipe listed in the Tasting activity.

reciprocal nature of gardening

Gardening is a gateway to healthy eating. When children have the opportunity to experience how food connects us to the natural world, they are much more willing to try and enjoy new fruits and vegetables. The reciprocal relationship of nurturing plants so that they in turn can nurture us with food is a marvelous and powerful thing to take part in.

fun idea

Emphasize the concept of the nutrient cycle by feeding plants in your garden. Encourage students to use their hands to place compost or other nutrient-rich soil at the base of a plant and say "Bon Appétit!"
Dirt Made Our Lunch

Procedure

Song – Dirt Made My Lunch. Sing along with “Dirt Made My Lunch” by “Solor” Steve Van Zondt of the Banana Slug String Band.

Introduction: Briefly discuss the importance of soil with a series of questions: Could we have plants without dirt? Could we have food without plants? Could we have food without dirt? If doing this lesson in the garden, have students scoop up a handful of dirt and examine it during this discussion. Leave questions open-ended as a set-up for using the Deconstructing a Cheeseburger activity to prove that “dirt made our lunch!”

Deconstructing a Cheeseburger

Students help prove how “dirt made our lunch.”

Draw columns on a display board for several cheeseburger ingredients and place the appropriate image at the top of the column (bun, burger, cheese, pickle, tomato, and avocado). Then, taking one cheeseburger ingredient at a time, challenge the class to trace each ingredient back to the soil. Hand out images for students to post on the display board as you connect each ingredient to the soil. For example, the cheese pictures would include cheese, milk, cow, gross, and soil. For a pickle, use a picture of a pickle at the top of the column and then a bottle of vinegar, cucumber, a cucumber plant, a dill plant, and soil. Here’s an example of the chart:

- BUN
  - Flour
  - Wheat
  - Soil

- BURGER
  - Beef
  - Cow
  - Grass
  - Soil

- CHEESE
  - Milk
  - Cow
  - Grass
  - Soil

- PICKLE
  - Vinegar
  - Cucumber
  - Cucumber Plant
  - Dill Plant
  - Soil

- TOMATO
  - Tomato Plant
  - Soil

- AVOCADO
  - Avocado Tree
  - Soil

Lunch Makes Our Dirt. Look for stages of decomposition in your garden and/or compost pile. For example, follow the decomposition of overripe fruits and vegetables periodically (e.g., 3 days, 3 weeks, 3 months) throughout the season or of a carved pumpkin after Halloween. Have students document the stages using photos or garden journals. See Keeping a Garden Journal on page 38 in the À la Carte section for garden journal ideas.

If you are doing this in a classroom and don’t have a school compost pile, bring in some items in various stages of decomposition from your home compost pile. Use recycled clear plastic containers or paper plates to demonstrate several decomposition stages. Or start a school composting project! You can also compost in a bag. Put food scraps, dried leaves, small plant parts, etc., in a zip top bag, mist with water and watch the process of decomposition take place.


**Tasting.** Remember to have students wash or sanitize their hands. Make fresh pickles with cucumbers from your garden or local market following the Kids’ Garden Refrigerator Pickles recipe below. See the Cooking & Eating in the Garden section on page 47 for additional tips for this and other recipes.

**Kids’ Garden Refrigerator Pickles**

Pickles recipe can also be found on page 50.

**Supplies:**

- Two quart size jars with lids
- 1 cup dill (flowers, seeds, and stems all work)
- 5-6 medium cucumbers
- 4 pinches of mustard seed
- 6 black peppercorns
- ½ cup of vinegar
- 2 cups of water
- 8 teaspoons salt

Harvest, wash, and slice the cucumbers into wedges. Place them in a bowl with the dill and salt, and mix them by hand or with a mixing spoon. Using two mason jars, add to each 2 pinches of mustard seed, 3 peppercorns, ½ cup of vinegar, and one cup of water. Add half of the dill/salt/cucumber mixture to each jar. Seal the lid and mix the pickles until you can’t wait any longer to eat them (minimum 10 minutes). If you have leftovers, check with your local food safety specialist to see how long they keep.

**For Younger Children (Pre K):** Have students color in the MyPyramid to match the ingredients of the cheeseburger. Orange: Bun (Grains), Green: Tomato and Pickle (Vegetables), Red: Avocado (Fruit), Blue: Cheese (Milk/Dairy), Purple: Burger (Protein). You can find MyPlate at http://www.choosemyplate.gov.

**For Older Children (3rd to 5th grade):** Have students match the cheeseburger ingredients to the appropriate MyPyramid food groups. Of the foods we eat, ask students to identify which of them are plants or parts of a plant? You can find MyPyramid at www.mypyramid.gov.

**Take Home Activity**

Give students another common food to deconstruct (e.g., peanut butter and jelly sandwich, spring roll, pizza, burrito, chips and salsa). Have them demonstrate how to do this activity for their parents/coregivers. Follow up the next day with a discussion about how to make healthy versions of foods like pizza. For example, make pizza with a whole-wheat crust, increase the amount of vegetables, and decrease the amount of meat. Or make burritos with less meat and cheese and more vegetables (e.g., zucchini, onions, garlic, shredded carrot, mashed sweet potato or butternut squash, lettuce, tomatoes, beans).
Lesson Overview

There are six main plant parts that people eat—seeds, roots, stems, leaves, flowers, and fruit. The following edible examples represent the six plant parts: bean (seed), carrot (root), asparagus (stem), spinach (leaf), broccoli (flower), and apple (fruit). This lesson is the first in a series of four Got Veggies? lessons that focus on the six main plant parts that we eat. It can be run in the garden or indoor classroom. This lesson also continues on ongoing investigation of the nutrient cycle that we began in Dirt Made Our Lunch. Guiding questions include: What do plants need to live and grow? How do plants help us live and grow? Where do nutrients come from and how do they get into our food? The answers to these questions can be found in explorations of plant development, the six plant parts we eat, and decomposition.

Objectives

Students will:

1. Identify what plants and people need to live and grow
   (Environmental Ed B.4.6; Nutrition Ed A.4.3; Science F.4.2, F.4.4)

2. Describe basic plant anatomy
   (Agricultural Ed D.4.1; Science F.4.3)

3. Understand connections between plants, people, and our natural environment (Science F.4.4)

4. Participate in a discussion (Long Arts C.4.3)

5. Trace food from origin to table (Nutrition Ed B.4.4)
Materials

Food:
- A fresh seed snack from the garden (e.g., green beans, peas. See Tasting activity on page 23 for more suggestions)

Supplies:
- Spray bottle(s) with water
- A bucket filled with soil or brown paper towels (to represent soil)
- A paper fan, piece of cardboard, bellows, or something that can simulate wind

Preparation

1. Prepare a spray bottle filled with water, a bucket filled with soil, and a fan for the Plant Role Play activity.

2. Harvest or purchase and wash foods for the Tasting activity (e.g., green beans, peas. See Tasting activity on page 23 for more suggestions).

Procedure

Introduction: In order to introduce students to the connection between plants, people, and the environment, briefly discuss how plants help people by providing something healthy for us to eat. Our bodies are healthy when we eat nutritious foods. Then discuss how people—through farming and gardening—help plants to grow and be healthy. What can we do to help plants grow and produce food? We often begin by planting a seed. We can help that seed sprout and grow by helping it get the things it needs (e.g., water, nutrient-rich soil). Nature provides the basic things plants need to grow, as students learn in the following activity.

voices from the Kids' garden

After observing the pepper he planted the previous week, a child exclaimed: “Look! The plant I planted grew!”

“This is why I want to bring my mom here. You grow the food and then it tastes so good!”
Plant Role-Play: Students become plants in order to learn what it is that plants need to grow and be healthy. We tell students that there are elements of nature that help plants grow and that they will discover what those elements are through a dramatic play activity.

Plants start as seeds, so ask students to crouch down and become a seed. Ask students to close their eyes, or turn off the lights if in the classroom, to simulate a seed that is buried in the ground. First, give students a small handful of soil, a piece of brown paper towel, or something else to represent soil. They should hold the soil as they crouch. Next, go around with a spray bottle and give all “seeds” a light misting of water. After receiving the water, encourage students to raise a hand in the air to simulate a seed sprouting through the soil. Following the water, have students open their eyes (or turn on the lights in the classroom) to receive sunlight. Tell students to rise a bit from the ground to demonstrate that they are growing. Finally, use a small paper fan (or some other representation of wind) to blow air on students, after which they can stand up to represent a full-grown and healthy plant.

Follow up by asking students what they needed to grow from a seed to a mature, healthy plant.

Answer: Sun, Soil, Water, and Air.

Chant: To reinforce what students learned in the role-play, they chant together, “Sun, Soil, Water, and Air! Everything we eat, and everything we wear, comes from Sun, Soil, Water and Air!” Begin chanting slowly and gradually pick up the tempo. Finish by slowing down and lowering voices to a whisper.
Tasting: Remember to have students wash or sanitize their hands. Serve a seed snack harvested from the garden or purchased from your local market—fresh green beans or peas make a great healthy snack. Other delicious seed and seeded fruit snacks from the garden include corn, sunflower seeds, grapes, cherry tomatoes and many varieties of berries such as raspberries and strawberries. Roasted pumpkin seeds, homegrown popcorn, and fennel seeds are favorite fall treats!

Additional Activities

Document the growth of a tomato, squash, or bean plant by using garden journals or taking photos: This is a fun way to follow the development of plants from seed to fruit. See Keeping a Garden Journal activity on page 58 in the A La Carte section.

planting.

We invite students to choose and plant from our seedling supply. Seedlings include basil, peppers, tomatoes, kale, cabbage, kohlrabi, onion, broccoli, fennel, flowers, parsley, and lavender. With a trowel in hand, kids plant their seedlings in garden beds. Many times kids help ready the garden beds for planting by pulling weeds, raking the soil, and adding compost by wheelbarrow.

We teach students to gently pull the seedling from its tray and spread, or pull apart, the compacted roots. Often, kids will teach one another this process as new planters join the station. Digging a hole large enough to accommodate the plant’s roots, and spaced far enough away from neighboring plants, kids give the seedlings new homes. They gently fill in the hole, adding a bit of compost and a loving wish for good growth.

We are not done yet! The next step is to mulch the area around the seedling with hay, creating a small nest. The hay provides cool shade for the soil, keeps soil moist longer, and prevents weed growth.

— Hannah Lovold,
Garden Educator,
Community GroundWorks
at Troy Gardens
Lesson Overview

The root is the first plant part to emerge from the seed in order to draw up the water and nutrients that the plant needs to grow. People also depend on roots because our bodies absorb important nutrients when we eat plants (i.e., fruits and vegetables). The nutrients we consume are drawn from soil by roots and then transported throughout the plant. Other animals also get their nutrients from plants (e.g., a cow eating grass), so we absorb valuable nutrients when we eat meat as well. In this lesson, students participate in a discussion about the function of roots and become familiar with a variety of roots we eat through an exploration activity.

Objectives

Students will:

1. Identify the six plant parts and describe the life cycle of plants (Pg Ed D.4.1; Science F.4.3)
2. Understand the function of various types of roots (Science F.4.1, F.4.2)

Materials

Food:

- A variety of root vegetables (e.g., carrots, sweet potatoes, radishes. See Exploration Activities on the next page and Tasting activity on page 26 for more suggestions)

Supplies:

- Display Board
- Knife
- Plates
- Napkins
- Roots of weeds or other plants (see Exploration Activities)
Preparation

1. Harvest or purchase — and wash — a variety of root vegetables, including orange root vegetables such as carrots or sweet potatoes. See Exploration Activities below and Tasting activity on the next page for more suggestions.

2. You will need a knife for the Exploration Activities and Tasting activity.

3. You may also need some plates or napkins for the Tasting activity.

Procedure

Introduction: On a display board in the garden or classroom, list the six main plant parts we eat: seeds, roots, stems, leaves, flowers, and fruit. Begin a discussion by asking students which of those parts is the first to grow out of a seed when it is planted. Ask students what plant part they eat when they eat a carrot. Answer: The root. Have students list as many root vegetables as they can. Have them identify all the root vegetables you have growing in your garden, or make a list of those they'd like to grow.

Based on the list, students know that roots can be a delicious and healthy food for us, but what do the roots do for the plant? Answer: Absorb nutrients and water from the soil and provide support by anchoring the plant in the ground. Ask students how people get the water and nutrients they need since they don't have roots. Answer: The nutrients that the roots absorb end up in the food we eat. Roots do a big job in making sure both plants and people have the nutrients needed to live and grow. The large roots that we eat such as sweet potatoes and celeriac also store food for the plant.

Exploration Activities: Harvest some weeds or other plants that are ready to be pulled up and examine the roots. The primary root is the largest and usually central root. Sometimes this is a taproot—a large tapered root like a carrot. Other plants, such as lettuce, have fibrous root systems. The secondary roots are the smaller roots that grow horizontally off the primary root. A taproot stores food for the plant and the secondary roots both anchor the plant and absorb water and nutrients.

Collect — and wash — a variety of interesting root vegetables from the garden, farmers' market, or grocery store, such as golden or radicchio beets, turnips, ginger, celeriac, rutabaga, beauty-heart (watermelon) radish, block Spanish
radish, orange and purple carrots, blue potatoes (technically a tuber), and sweet potatoes. Organize
students in groups of four and tell them they are root veggie explorers. Give each group one or two of the root
vegetables. They will need to use their senses to look at, feel, smell, and taste these roots. Go around to each group and cut one sample of
their root in half so they can see the inside. If possible, offer them a sample to taste (remember to have students wash or sanitize their hands before tast-
ing). Based on their observations about various root characteristics,
the group should come up with a new and unique name for these
roots (see Name That Veggie activity on page 44 in the À La Carte Section).
Have each group share the name of their root and explain how they arrived
at that name. Afterwards, students can look for ways that all of the roots are
similar to one another and how they are different.

**Tasting:** Follow up the exploratory activity with a tasting of a variety of
root vegetables. Remember to have students wash or sanitize their hands
before tasting. Offering a familiar choice, such as a carrot, makes it easier for
students to try less familiar roots. Raw sweet potato, radishes, celeriac, and
salad turnips also make great snacks. Note: The “super orange” vegetables
that are roots (e.g., carrots and sweet potatoes) provide our bodies with
extra power, so they are important to eat often. For older students, you could
explain that the reason that orange vegetables are “super” is because they
contain extra amounts of key nutrients like vitamins A and C and potassium.
These nutrients are important for many reasons, including the following: Vitamin
A is essential for keeping our eyes and skin healthy and for protecting our
body against illnesses like the cold and flu; Vitamin C keeps our gums and
teeth healthy; and potassium helps our hearts stay healthy. During or after the
tasting, encourage students to create a superhero type name for each of the
orange root vegetables they have explored.

**For Older Children (3rd to 5th grade)**
Explain that many people don’t eat enough orange vegetables like carrots and
sweet potatoes. Ask students what they could do to eat more “super orange”
vegetables in their meals and snacks. Write their suggestions on the board.
Encourage them to pick one of these suggestions and try it at home. Have them
report back on how they liked it. Here are a couple suggestions for your list:

* Just like carrots, sweet potatoes make a great raw snack. Really!
* Make sweet potato French fries. Scrub or peel them, cut them into French fry size, and toss with a small amount of Olive or Canola oil and salt.
  Spread them in a single layer on a sheet pan and bake at 400 degrees for 30 to 40 minutes, or until done to your liking. Turn the fries a few times as they bake to ensure even browning.
• Add grated carrots to your pasta sauce or salads.
• Make a fun snack—broccoli and carrot trees. Take a carrot stick (tree’s trunk) and add 1-2 broccoli florets (tree’s leaves and branches) to one end of the stick. Add a dollop of yogurt-based veggie dip to the broccoli florets to make a snow-covered tree.

Take Home Activity
Develop or find a recipe based on one of the suggestions for eating more carrots and sweet potatoes. Perhaps a parent or caregiver could provide a favorite recipe. Send the recipe home with students to make with their family.

Additional Activities
Sprouting plants:

Sweet potato: Stick three toothpicks around the middle of the potato and support them on the rim of a clear glass or plastic cup with the plumper or rounded side of the potato facing up. Fill the glass with water so that the bottom of the potato is in water. Change the water weekly and replenish what evaporates. The roots will develop on the tapered bottom end of the potato while the stem and leaf buds develop at the top.

Carrot: Select fresh, large-sized carrots (not “baby” carrots) from the garden or market for this activity. Do not use those that are sold with the tops still on them. Remove the top two inches of the root (carrot) for the experiment and enjoy eating the rest. Put a one-inch layer of pebbles or pea gravel in a saucer. Place the carrots on top of the gravel, cut-side down, and add more pebbles to hold them in place, leaving about an inch or two of the carrot root exposed above the pebbles. Space the carrots about two inches apart in the saucer. Add water to the top of the pebbles and maintain that water level at all times. Feathery green leaves will grow out of the carrot tops.

It Takes a Community
Getting community members and organizations involved in youth gardening is an invaluable resource. UW-Extension Master Gardeners can offer technical support on how and when to plant your garden as well as maintenance and troubleshooting; local non-profit organizations may assist with finding funding opportunities; Parent Teacher Organizations can provide ideas and volunteers; School district officials can ensure that you have the support and supplies needed to make the garden more sustainable. In turn, community members see that investing in the health and education of youth is a powerful way to ensure a healthy community into the future.

—Elizabeth Gering, Youth Grow Local Coordinator, Community Groundworks at Troy Gardens
Flowers & Fruit

Lesson Overview

In this lesson students learn that flowers produce the fruits we eat, and that some flowers themselves are edible. A short story is used to illustrate the process of flower, fruit, and seed growth. Follow the story with an activity in which students correctly arrange photos of flower and fruit growth. You may also have students document the growth and development of flowers and fruit in their garden journals with drawings or with photos.

Objectives

Students will:

1. Identify edible flowers and fruit as healthy food choices
   (Health A.4.3, B.4.1; Nutrition Ed C.4.2, F.4.1)

2. Explain how plants grow and develop (Science C.4.2, F.4.3)

3. Describe the function of flowers (Science C.4.2, F.4.3)

4. Identify and taste fruits and vegetables that come from flowering plants
   (Nutrition Ed F.4.2)

Materials

Food:

- Variety of edible flowers and fruits (e.g., broccoli, cauliflower, cucumbers, apples, nasturtiums. See Tasting activity for more suggestions)
- Vegetable and fruit dip (e.g., yogurt or low-fat sour cream and dill, ranch dressing)
Supplies:

- Books: How Do Apples Grow? by Betsy Maestro, The Reason for a Flower by Ruth Heller, or other books that illustrate how fruit grows from flowers.
- Photos or drawings that represent the stages of flower and fruit development (Michigan State University Extension has a series of photos depicting the stages of apple growth: http://apples.msu.edu/horticulture/growth_stages)
- Plates
- Napkins
- Cutting Boards
- Knives

Preparation

1. Collect photos or drawings that represent different stages in the development of flowers and fruit for Flower to Fruit Theater activity.

2. Harvest or purchase – and wash – a variety of edible flowers and fruits (e.g., broccoli, cauliflower, cucumbers, apples, nasturtiums. See Tasting activity for more suggestions). Plan ahead by planting some edible flowers and fruits in your garden.


voices from the Kids’ Garden

“I wish I could grow a big giant strawberry so that we could fill, eat it!”

“So this is where the supermarket gets all its food?”

During a harvesting and snacking activity at a mulberry tree in the Kids’ Garden, a child exclaimed, “I can’t believe nature can taste so good! That’s why I like to learn about nature.”
Procedure

Introduction:

Start the lesson with a discussion. What do you think of when I mention flowers? Flowers are definitely beautiful and smell nice. Did you know some flowers are also nutritious? Can you think of some flowers that we eat? Answer: Broccoli, Cauliflower, Violets, Squash Blossoms.

Note: You may want to remind students that not all flowers are edible, and they shouldn’t eat flowers unless a trusted adult says it’s okay.

Story Time:

Some flowers are good for us to eat, but they also produce something else we eat: fruit. Use the book, How Do Apples Grow? by Betsy Maestro, to structure the story of a plant producing a flower and a fruit.

Apple buds survive the winter and blossom in the spring. Then a bee comes for nectar and carries pollen from another flower. The pollinated flower produces a fruit. Consider using leading questions before turning to the next page of the book so students can participate in telling this story.

Flower to Fruit Theater:

This activity can be run in the garden or classroom. You will need photos or drawings that represent different stages in the development of flowers and fruit. Student volunteers then come to the front of the class and hold a photo or drawing. These are the actors. The rest of the students are directors. They help put the actors in the correct order to represent the development of the flower and growth of the fruit. Ask the actors to hold their photo or drawing nice and still so it can be easily seen. They also need to take direction even if they disagree with where they are being placed. The directors should take turns offering suggestions. Use clues and leading questions, if needed, to help students put the photos in the right order.

Run this activity with a fruit and a vegetable. First, use a set of photos or drawings depicting apple development (e.g., an apple blossom, a bee on the blossom, fruit starting to form, a small apple, and a mature apple). Second, use photos or drawings of a developing squash (e.g., a small flower, a fully developed squash blossom, a small squash, and a fully-grown squash). If you run this activity in the garden, you can provide students with time afterwards to explore the garden looking for flowers and fruits in different stages of development. Have students document what they find by taking photos or drawing pictures and use these for the next time you run this activity.
Tasting:

Offer a garden medley of edible flowers and fruits—including broccoli, cauliflower, cucumbers, apples, and nasturtiums. Serve the medley with a yogurt-based dip for a tasty garden snack. Johnny Jump-ups, nasturtiums, broccoli, cauliflower, asparagus tips, squash blossoms, and violets are all edible flowers that can be grown in your garden or found at your local farmers’ market. Consider holding a flower tasting in the garden! Many fruits can be grown in the garden including blueberries, raspberries, grapes, cherries, peaches, apples, cantaloupes, and watermelons. You can also grow many delicious and nutritious vegetables (also considered “botanical fruits” because they contain seeds) such as zucchini, cucumber, winter and summer squashes, eggplant, peppers, tomatoes, okra, green beans, and pea pods.

Note: Winter squashes like butternut squash and pumpkins are “super orange” vegetables that are packed full of extra nutrients and make up a regular part of a healthy diet. For older students, you could explain that the “super orange” vegetables are particularly important to eat often because they contain extra amounts of key nutrients like vitamins A and C and potassium. These nutrients are important for many reasons, including the following: Vitamin A is essential for keeping our eyes and skin healthy and for protecting our body against illnesses like the cold and flu; Vitamin C keeps our gums and teeth healthy; and potassium helps our hearts stay healthy.

Additional Activities

• **In the garden**, have students document, over time, the growth and development of flowers and fruit using garden journals or by taking photos. Strawberry plants and squash plants work well because it is easy to see the developing flowers and fruit. Plan ahead to grow squash and strawberries in the garden.

• **How many flowers and fruits can be found in the garden?** Encourage students to find them and make a map. Or make a collage of photos or drawings. Also see Nettie Rope & Flower Braiding activity on page 42 in the A La Corte section.

• **Flower Anatomy in the Garden:** Provide students with a simple diagram depicting different flower parts. Dissect squash or other garden flowers to examine parts in greater detail.

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**Vegetable or Fruit?**

Vegetable and fruit are culinary terms describing different types of food from plants. Essentially, fruits are the sweeter of the two. Fruit, however, also happens to be a botanical term for one of the six plant parts. Botanically speaking, the fruit is the part of the plant that carries the seeds. A vegetable can be any part of a plant. There are, for example, root vegetables and leaf vegetables, etc. And so, there can in fact be fruit vegetables, which are culinary vegetables that are made of the fructifying body of the plant. Examples include tomatoes, cucumbers, and eggplants.

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— Whitney Cohen,
Education Director,
Life Lab Science Program