

FoodPrints Curriculum - 2010 - 2011

1st Grade

<p>Lesson #1 (time: 2 hours)</p>	<p>Fall Garden Exploration and Introduction to Cooking <i>Studying and Eating Different Parts of Edible Plants</i></p> <p>Lesson Overview: Students tour the garden, focusing on identifying different parts of the edible plants, learning to identify the roots, stems, leaves, flowers, fruits and seeds. They study the male and female winter squash blossoms, learn to tell the difference between the two, and choose a small squash to adopt as a class. They measure and photograph the squash and together, create a list of words to describe it. (They will return in a month to measure the growth of this particular squash and draw how it has changed.) The concept of observational, scientific drawing is introduced and students then choose another interesting plant and spend 15 minutes with it making a detailed observational drawing. After drawing they harvest fall vegetables from the garden that can be eaten raw, such as tomatoes, peppers, cucumbers and herbs. In the classroom, they rotate through three cooking stations where they learn to use knives safely by preparing the produce for snacks, practice measuring wet and dry ingredients, and are introduced to the rest of the cooking equipment in the classroom. For a snack, they eat the produce from the garden with homemade ranch dip.</p>
<p>Lesson #2 (time: 2 hours)</p>	<p>Leaves We Eat <i>Drawing and Labeling Plants in the Garden, Harvesting and Eating Three Varieties of Kale</i></p> <p>Lesson Overview: After observing indoor plants and using them to generate a list of the six main parts of plants, students move out to the garden. First, they return to the winter squash their class adopted, and measure it to record its growth. They create a new list of words to describe it, and photograph it. Splitting into three groups, they dig up two whole plants, including the root structures. (We used a pepper plant and an amaranth plant.) The third group harvests three different varieties of kale: Tuscan, curly and Red Russian. In the classroom, they make detailed drawings of the whole plants, and learn to label each part. They observe and discuss the different varieties of kale, looking at ways they are similar and different from one another, and then prepare the leaves, cook them and eat them.</p>
<p>Lesson #3 (time: 2 hours)</p>	<p>Winter Salads: Roots, Fruits and Hearty Leaves <i>Planting Seedlings to Over Winter and Making Salad from Carrots, Beets, Squash, Apples and Kale</i></p> <p>Lesson Overview: Students are introduced to the concept of winter hardy plants, and then plant collard and kale seedlings in the garden. They return to the winter squash their class adopted for the third time and measure it to see how it has grown. They generate another list of words to describe the squash, take a photograph of it and harvest it. They harvest beets, kale and carrots and bring all the food to the classroom to prepare. Inside, the produce is displayed and students discuss which parts of the plants are being eaten. (We eat the roots of the carrot and beet plants, the leaves of the kale, and the fruit of the squash plant.) Students read <i>Tops and Bottoms</i> by Janet Stevens which furthers their understanding that we eat different parts of different plants, and then they use the harvested food to prepare three different winter "salads."</p>

<p>Lesson #4 (time: 2 hours)</p>	<p>Growing and Eating Beans <i>Making Bean and Vegetable Chili and Planting Seeds to Grow, Study and Compare</i></p> <p>Lesson Overview: In the two days before preparing the chili and planting bean seeds, help students set up a simple experiment to observe the effects of soaking dry beans in water overnight. They will make predictions about the experiment and observe the results. The soaked beans are then cooked so they will be ready to use in the chili. During the lesson, students work together to chop and grate the ingredients for the chili and watch an adult cook it over a hot plate. While the chili is cooking, students plant bean and lettuce seeds, make a graph predicting how long it will take for each type of seed to germinate, and work on a sequencing project about planting seeds in their journals. At the end of the lesson they eat the chili all together.</p>
<p>Lesson #5 (time: 2 hours)</p>	<p>Which Part of This Plant Do We Eat? <i>Cooking with Roots, Seeds and Fruits and Creating Plant Part Posters From Seed Catalog Pictures</i></p> <p>Lesson Overview: Students begin by cutting apples for applesauce. While the apples are cooking, <i>One Bean</i> by Anne Rockwell is read. Using one of the bean plants they began during the last lesson, they identify each part of the plant, making an empty chart on the board. Together, using some of the produce that will be cooked that day, they brainstorm a few foods we eat that represent each of the six major parts of plants: roots (carrots and sweet potatoes), stems (celery and asparagus), leaves (spinach and kale), flowers (broccoli and cauliflower), fruits (peppers and apples) and seeds (beans and wheat.) They begin to better understand the concept that while edible plants have many different parts, we eat different parts of different plants. (For example, while we eat roots of the carrot plant but not the leaves, we eat the leaves of the spinach plant and not the roots!) Students work in small groups using seed catalogs to find examples of each basic plant part that we eat. They cut and paste the pictures to makes posters to organize and display what they have learned. They prepare the dough for sweet potato biscuits and eat the finished applesauce with precooked sweet potato biscuits. (The new dough is taken home to be cooked for the next class.)</p>
<p>Lesson #6 (time: 2 hours)</p>	<p>Do All Plants Grow From Seeds? <i>Planting and Dissecting Seeds, Tubers, Bulbs and Cuttings – and Harvesting and Eating Kale</i></p> <p>Lesson Overview: Students begin by generating a list of the six basic plant parts they have learned about already. They are asked to identify which of those plant parts can grow new plants. (seeds, and some stems, as cuttings) They are introduced to two other plant parts that can grow new plants, bulbs and tubers. Then, they move to the garden and plant seeds (peas,) tubers (potatoes,) and bulbs (onions.) Another group harvests the kale that they planted in the spring and has overwintered, and everyone takes a cutting from a rosemary plant. The rosemary stems are put in water to grow roots, and they kale is brought inside. In the classroom, students prepare the kale to be cooked, get it started all together, and then dissect seeds (soaked lima beans,) tubers (sprouted potatoes,) and bulbs (daffodils.) They discover that each of these plant parts is able to grow new plants because they have embryos (baby plants) inside, are surrounded by food for the embryo, and have a coating on the outside to protect the food and the embryo. The <i>book How Groundhog’s Garden Grew</i> by Lynne Cherry is read which reinforces the concept that seeds, tubers and bulbs are needed to start a vegetable garden. When the kale is finished, they eat it with brown rice or whole wheat orzo noodles.</p>
<p>Lesson #7 (time: 1 hour)</p>	<p>Spring Garden Observation</p> <p>Lesson Overview: <i>Whose Garden Is It</i> by Mary Ann Hoberman is read to the whole group, which introduces students to idea that many, many different creatures and natural forces must all work together for a garden to grow. They take tours of the garden in small groups to observe how the garden is changing and growing in the spring, and then choose one or two particularly interesting plants to study, draw and describe in</p>

	<p>detail. When they finish, the rest of their time is used to write their ideas about who and what would our school vegetable garden for their own.</p>
<p>Lesson #8 (time: 1 hour)</p>	<p>Radish Harvest <i>Preparing a Traditional French Snack for Children of Radishes, Bread and Butter</i></p> <p>Lesson Overview: Students each harvest a radish from the garden. In the kitchen, they complete a detailed drawing of the radish, labeling each part in their journal. They remove the root from the leaves and stem and slice the root into thin pieces. They spread a piece of whole wheat bread with butter, layer it with radish slices and sprinkle on a tiny bit of salt. Everyone enjoys the simple snack together.</p>
<p>Lesson #9 (time: 2 hours)</p>	<p>Spring Garden Harvest <i>Year End Celebration with Vegetable Stir Fry or Salad and Potato-Chive Soup</i></p> <p>Lesson Overview: Students begin by harvesting the spring garden crops, such as bok choy, spinach, lettuce, arugula, carrots, sugar snap peas and potatoes. As each plant is harvested, they examine the entire plant to determine which biological part of the plant is edible (root, stem, leaf, flower, fruit or seed) and draw and label these parts in their journals. In the kitchen, students work in small, adult supervised groups to prepare either a vegetable stir fry or salad and potato-chive soup. They go home with a book of recipes from the year for their family to use at home.</p>

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3rd Grade

<p>Lesson #1 (time: 2 hours)</p>	<p>Fall Garden Exploration and Introduction to Cooking <i>Eating a Rainbow of Colors for Good Health</i></p> <p>Lesson Overview: Students tour the garden, focusing on discussing and asking questions about the life cycles of different edible plants in the garden. They study the male and female winter squash blossoms and learn to tell the difference between the two. In small groups, they choose a young squash to adopt. Each group measures and photographs their squash, draws and describes it in their journals, and figures out how to record its location so they can successfully find it again next month. Then, they harvest fall vegetables from the garden that can be eaten raw, such as tomatoes, peppers, cucumbers and herbs. In the classroom, they rotate through three cooking stations where they learn to use knives safely by preparing the produce for snacks, practice measuring wet and dry ingredients, and are introduced to the rest of the cooking equipment in the classroom. They eat the produce from the garden with homemade ranch dip and discuss the importance to our health of eating a rainbow of fruits and vegetables.</p>
<p>Lesson #2 (time: 2 hours)</p>	<p>Investigating Ingredients in our Food <i>Comparing Homemade Pesto to Ingredients in Common Foods at the Grocery Store</i></p> <p>Lesson Overview: Students begin in the garden where they return to the squash they adopted and observed. Again, they measure, photograph, draw and describe it, noticing how it has changed since their last visit. In small groups, they harvest basil, cherry tomatoes, bell peppers and cucumbers. They prepare the pesto and chop vegetables to dip in it together. Then, they compare the ingredients in pesto to ingredients found in processed foods that we commonly buy in boxes at the grocery store. They learn to read the ingredient label on a box of food, make a list of those ingredients and mix them together in a cup. (They discover that the five main ingredients in many boxed foods are white flour, sugar, corn syrup, oil and hydrogenated oil, and corn starch or salt.) Then, they eat the pesto with whole wheat noodles and cut vegetables to dip in it and compare the quality of the pesto ingredients to the ingredients found in most boxes of processed food.</p>
<p>Lesson #3 (time: 30 minutes)</p>	<p>The Importance of Eating Dark Green and Orange Vegetables <i>Harvesting Winter Squash and Dark Green Fall Crops, Garden Clean Up</i></p> <p>Lesson Overview: The lesson begins in the garden with small groups of students returning to their adopted winter squash for the third and final time. They measure, photograph, draw and describe it in their journals. When complete, they harvest their squash. Then, in small groups, they harvest any dark green vegetables that are growing in the garden, such as broccoli, kale, collards or Brussels sprouts. In the classroom, they study both the insides and outsides of a number of different winter squash varieties and make detailed, observational drawings of them. They compare the winter squash to summer squash (zucchini and yellow squash) and discuss how the physical characteristics of the different types of squash affect which times of the year they are available and how long they can be stored. In small groups they prepare the ingredients for squash soup and the dark green vegetables to be steamed or sautéed. While the food is cooking, the importance of eating dark green and orange vegetables is discussed and students generate a list of these foods that they like to eat. Finally, students enjoy the soup and veggies together.</p>
<p>Activity (time: 45 minutes)</p>	<p>Sweet Potato Harvest</p> <p>Activity Overview: Students cut off the dry sweet potato vines and move them to the compost pile. Wearing gardening gloves, they dig into the soil to harvest the sweet potatoes and pack them into cardboard boxes.</p>

	<p>Students learn that while the sweet potatoes can be eaten right away, they are usually kept in a dark, warm place for a few weeks to cure first. Curing dries them out a little which concentrates the natural sugars and intensifies their flavor.</p>
<p>Lesson #4 (time: 2 hours)</p>	<p>Why Eat Whole Grains? <i>Making Whole Wheat Flour and Using Whole Wheat Tortillas to Make Sweet Potato Quesadillas</i></p> <p>Lesson Overview: Students begin by writing about their memories of harvesting the sweet potatoes or by writing a detailed description of one sweet potato. They use the sweet potatoes to prepare the filling for sweet potato quesadillas. While the filling is cooking, they learn about the parts of a grain seed (endosperm, germ and bran) and which nutrients each part of the grain contains. They draw a detailed picture of a stalk of wheat and grind wheat berries (kernels/seeds) in a coffee grinder to make whole wheat flour. Then, they sift the whole wheat flour to make white flour and compare the two by tasting whole wheat pita bread and white pita bread. Finally, they put the finished sweet potato filling into warm whole wheat tortillas and enjoy them together.</p>
<p>Lesson #5 (time: 2 hours)</p>	<p>Eating 5 A Day By the Season <i>Preparing Salads from Locally Available Winter Produce</i></p> <p>Lesson Overview: Students are introduced to the concept of eating five fruits and vegetables a day. They use the one-day food diaries they have kept to see if they are eating enough fruits and vegetables on a typical day, and discuss how they could include more fruits and vegetables in their diets. They explore the question of whether it makes sense to eat the same fruits and vegetables year round and use their experiences in the vegetable garden to begin identifying which fruits and vegetables are available locally in each season. We discuss the cost/environmental impact of transporting food across the country/world by comparing the calorie/energy expenditure of eating strawberries from California on the East Coast in winter to eating locally produced strawberries in season. Students work in small groups using pictures from seed catalogs to make posters showing which fruits and vegetables are available locally in each season. Finally, in four groups, they prepare winter salads: kale salad, apple beet salad, carrot salad and sweet potato salad. While the salads are being served, <i>Who Grew My Soup</i> by Tom Darbyshire is read. Everyone eats the seasonally appropriate salads together and discovers that they have eaten five vegetables in a rainbow of colors in one snack.</p>
<p>Lesson #6 (time: 2 hours)</p>	<p>Nutrient Dense Foods vs. Energy Dense Foods <i>Spring Planting, Harvesting and Preparing Kale, and Learning to Choose Nutrient Dense Foods</i></p> <p>Lesson Overview: Students begin in the garden to plant spring crops. One group plants radish and carrot seeds, another plants lettuce seedlings, another harvests kale that has overwintered. In the classroom, they prepare the kale leaves for sautéed greens with garlic and lemon. Then, they study the meaning of the words calorie, energy and nutrient and learn to differentiate between nutrient dense foods and energy dense foods. In small groups, they sort sets of cards with pictures of foods/meals into these two groups, discussing how they are making the decisions as they go. To conclude, they enjoy a nutrient dense snack of sautéed kale and whole wheat orzo or brown rice together.</p>
<p>Lesson #7 (time: 1 hour)</p>	<p>Choosing Nutrient Dense Desserts Understanding Diabetes and Heart Disease <i>Nutritious Dietary Choices Can Help Our Bodies Prevent These Diseases</i></p> <p>Lesson Overview: By observing a demonstration of red water (blood) being poured through a piece of clear plastic tubing (artery) clogged with shortening (fat), students learn about the effects of hydrogenated oil</p>

	<p>(trans fats) on their hearts. They read labels of soda and other boxes of food to discover how ubiquitous high fructose corn syrup is in our food supply and learn about the ways it contributes to type 2 diabetes. They take home a set of recipes for nutritious, nutrient dense desserts, and prepare yogurt parfaits with fruit and dark chocolate chips.</p>
<p>Lesson #8 (time: 1 hour)</p>	<p>Radish Harvest <i>Preparing a Traditional French Snack for Children of Radishes, Bread and Butter</i></p> <p>Lesson Overview: Students each harvest a radish from the garden. In the kitchen, they complete a detailed drawing of the radish, identify the colors (red and white,) and learn about the beneficial phytonutrients each of those colors provides. They slice the radish into thin pieces. They spread a piece of whole wheat bread with butter, layer it with radish slices and sprinkle on a tiny bit of salt. Everyone enjoys the simple snack together.</p>
<p>Lesson #9 (time: 2 hours)</p>	<p>Spring Garden Harvest <i>Year End Celebration with Vegetable Stir Fry or Salad and Potato-Chive Soup</i></p> <p>Lesson Overview: Students begin by harvesting the spring garden crops, such as bok choy, spinach, lettuce, arugula, carrots, sugar snap peas and potatoes. As each plant is harvested, they record the colors they will eat, and count the number of vegetables they will use in what is to be prepared. In the kitchen, students work in small, adult supervised groups to prepare either a vegetable stir fry or salad and potato-chive soup. They go home with a book of recipes from the year for their family to use at home.</p>