



Wild Nutrition

A K-4 Nutrition and Home Economics Lesson

Developed by Allaire Diamond M.S., M.Ed. as part of the project **People, Plants & Gathering in Northern Maine**, a collaboration between the USDA Forest Service Northern Research Station and the University of Vermont, funded by the Northeastern States Research Cooperative. Principal project investigators: Dr. Marla Emery, USDA Forest Service, and Dr. Clare Ginger, University of Vermont.¹

Topics: Nutrition, food choices, wild foods, nutrient content

Maine Learning Results Addressed:

Health Education & Physical Education A6: Basic Health Concepts:

- (K-2) Students identify basic health terms related to nutrition

Health Education & Physical Education B2b: Locating Health Resources:

- (3-5) Students locate valid resources from the home, school and the community that provide valid health information

Health Education & Physical Education C1a: Healthy Practices & Behaviors:

- (K-2) Students choose healthy foods
- (3-5) Students design healthy menus

Objectives: Students will

- Classify types of ingredients in a recipe
- Identify wild foods that could substitute for some ingredients in conventional recipes
- Rewrite recipes to include wild foods.

Background: Wild foods can be delicious regional and local additions to common recipes. Often, they have less sugar and higher amounts of other vitamins and nutrients than foods grown in conventional agriculture. In this lesson, students learn about how wild foods can be part of a healthy diet. They begin by looking at recipes and learning about wild plants to come up with potential substitutions for some conventional ingredients. An optional extension includes categorizing the foods based on the USDA food pyramid.

Materials:

- Recipes provided by students
- **Wild Nutrition** handout

¹ Photo by Allaire Diamond

- (Optional) Computer with internet access and a projector for showing pages from the **People, Plants, and Gathering in Northern Maine** website.
- (Optional) Poster or diagram of the USDA food pyramid (Pyramid posters and images can be downloaded from http://www.mypyramid.gov/tips_resources/printmaterials.html and ordered at http://www.mypyramid.gov/global_nav/order.html)

Time: 80 minutes. With additional activities and assessments, time will increase.

Assessment: Rewritten recipe with wild foods

Preparation for teaching:

- A few days before teaching this lesson, send a letter home with students so that their parents can help them find a recipe to bring to class. Following is some sample text:

Dear parents, We are studying about nutrition, including some nutritious wild foods. Please help your child select a recipe for a fruit muffin, vegetable, or salad to bring to class as part of our study. It would be ideal if this is a recipe your child knows and likes. Please help your child make a copy of the recipe and send it in by (day/date). Thank you,

- Gather wild foods from the list given below so that students can taste them.
- Make any additional modifications to this lesson based on your class and grade level.

Activities:

1. **Preparation.** Before teaching the lesson, send home a letter with sample text similar to that above, and tell students that they need to bring in a recipe for a fruit/vegetable muffin, a vegetable, or a salad. It is best if students have made this recipe with their family and like the food.
 - a. Sample foods include blueberry, carrot, or zucchini muffins, green bean casserole, or garden salad.
2. **Introduction.** When students arrive with their recipes, ask how many have ever cooked. Then ask if they have cooked following a recipe. Ask how many have made one of the recipes they brought or if it is a recipe their family uses. (show of hands for questions) Explain that a recipe is a set of directions for making a particular food in a specific way. But if you know the parts of a recipe and how they work, you can make some changes to recipes.
3. **Identifying ingredients.** Tell students that we are particularly interested in the fruit and vegetable ingredients in their recipes. Have them name some examples of fruits and vegetables and then try to find and circle these kinds of ingredients on their recipes.
4. **Introduce substitute ingredients.** Then ask if anyone who has cooked has ever started to cook and then realized they didn't have all the ingredients. When this happened, what did they do? Note that if you can't get to the grocery store, you may just have to substitute another ingredient. Ask if anyone has done this and if the food still tasted good with the substitute ingredient. Explain that substituting ingredients is a way to be creative as well as resourceful, and use what you have available or in season.
5. **Wild foods.** Ask if anyone has ever picked berries or other plants from the wild (ex. Dandelion greens, fiddleheads, wild blueberries, wild raspberries, wild strawberries). Explain that these could also be substituted in recipes.
6. **Wild foods of Maine.** Show students this list of wild foods that people eat in Maine. These foods were identified by interviewing people in Maine who harvest wild plants. You may want to find pictures of these plants (some are available on the website **People, Plants, and Gathering in Northern Maine**, http://nrs.fs.fed.us/sustaining_forests/conserv_e_enhance/special_products/maine_ntfp) and either print them out as a display or project them using a computer or overhead. If possible, have some samples of some of these foods available for students to taste.
 - Wild Blueberry
 - Burdock (root)
 - Wild Chive
 - Chokecherry
 - Highbush Cranberry
 - Dandelion (leaf)
 - Fiddlehead
 - Hazelnut
 - Sugar Maple (for maple syrup)
 - Plantain (leaf)
 - Red Raspberry
 - Rose (rosehips for tea)
 - Wild Strawberry
7. **Making substitutions.** Have students work with a partner to share their fruit and vegetable ingredients from their recipes, and then have them try to come up with substitutions for those ingredients. If possible, have them make substitutions from the list of Maine wild

foods. They should fill in their answers on the **Wild Nutrition** worksheet. The handout also asks them to decide whether or not a food is wild. They should leave the USDA Food Pyramid section blank for now.

8. Share some or all of the story of Faye Hafford from the website **People, Plants, and Gathering in Northern Maine**:
http://nrs.fs.fed.us/sustaining_forests/conserve_enhance/special_products/maine_ntfp → People → Faye Hafford. Especially share her childhood stories of gathering wild foods. You may want to project the website on a screen and have students read along, or show some of the plant profiles with pictures of the plants Faye grew up eating.
9. **Processing.** Ask students to write down (or, for younger students, draw) the foods that Faye and her family gathered from the wild. They could compare this list with the foods they have brainstormed today, or with foods they have gathered themselves or with their families.
10. **Rewriting recipe.** Ask students to rewrite the recipe they brought using one or more wild foods from the list. They should pass in this rewritten recipe. Younger students who have not yet mastered writing could draw the ingredients and get help labeling them.
11. **Optional extensions.**
 - a. Compile student recipes into a class cookbook. The cookbook could have a section on wild plants and when and where to find them – this could be a good project for a parent or classroom volunteer to help with.
 - b. Take a walk as a class to find or gather wild foods.
 - c. Schedule a day when they make some of these recipes and bring them to class to share.
 - d. **USDA Food Pyramid.** Share the USDA Food Pyramid with students. Explain what it is (there are extensive curriculum materials about this pyramid on the USDA website; see “Materials” above). Have students categorize their wild and substitute foods according to the pyramid and record this information on their worksheet.



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Directions: Fill in the table below with ingredients from your and your partner's recipes.

Name: _____

Original ingredient	Substitute ingredient	Is the substitute a wild food? Yes or No	Food Pyramid Category