

Potatoes

- 1. Make a chart comparing the nutrient values of the following potato products: baked potato (without toppings), mashed potatoes, boiled potato, potato chips (fried), potato chips (baked), and hash browns (or tater tots). Use similar serving sizes (e.g., ½ cup) for each product. In your chart, include columns for calories, fat, carbohydrate, protein, Vitamin C, Vitamin B6, iron, fiber, sodium, and calcium. Describe the differences in fat, caloric, and nutrient content of these products. Draw conclusions as to why there are these differences.**

Nutrient charts will vary.

Comparing the differences in fat, calories and nutrient content will demonstrate to students how food preparation can have a significant impact on nutrient values. For example:

- Both mashed potatoes and tater tots are very high in calories and fat, due to added fat and oils used in the preparation.
 - The boiled and baked potatoes are much lower in calories and fat because the cooking methods do not require any added fat.
 - Baked and boiled potatoes also have the highest amount of Vitamin C and fiber since the skin is left on.
 - Mashed potatoes have the most calcium (presumably because it is prepared by adding milk or a dairy product that is an excellent source of calcium).
 - Mashed potatoes and tater tots are very high in sodium.
 - The baked potato chips have less fat than the fried potato chips and are also higher in calcium. The fried potato chips are higher in Vitamin C. Neither provides a good source of other nutrients such as fiber, iron and Vitamin B6.
- 2. Plan a meal that includes a potato. The meal should be low in calories, fat, and sodium and provide at least 20 percent of the recommended Daily Value for iron, fiber, and calcium. Which potato would you select? What other foods (grains, fruits, vegetables, meat/beans, dairy products) would you include to make a complete, balanced meal? Which vitamins are included in your meal?**

Student answers will vary. Encourage students to use chart from previous question as a resource. The following recipe criteria may also be used (per National Cancer Institute and Project Lean recipes).

Recipes must contain the following:

- At least one serving* of a fruit and/or vegetable per serving.
- No more than 30% of calories from fat or 3 grams total fat per 100 calories.
- No more than 10% of calories from saturate fat or 1 gram saturated fat per 100 calories.
- No more than 90 to 100 milligrams cholesterol per serving.
- No more than 480 to 720 milligrams sodium per serving.

**One serving counts as:*

- 1 medium fruit or vegetable
- 1 cup salad greens
- ½ cup fresh, frozen or canned fruits or vegetables (packed in 100% juice)
- ¼ cup dried fruit
- ¾ cup 100% fruit juice

- 3. California grows four percent of the nation’s potato crop, but its share of exports is more than 30 percent. Hypothesize why California’s crop accounts for a large proportion of the country’s exports. Investigate where California’s potatoes are sold. Track California’s potatoes as they travel from the farm to processing or the market. Find out if the potatoes sold at your local grocery store are California grown. Based on your findings, draw conclusions as to why California contributes such a large percentage of potato exports.**

Results and findings will vary by region.

- A majority of US grown potatoes are grown in the “interior” states – with more than half coming from Idaho. As a result, these potatoes are generally shipped to the coastal states, rather than exported out of the country (which contributes to larger shipping costs).
- Due to California’s proximity to Asia, Russia and eastern Africa, California grown potatoes are exported to these regions (lower shipping costs) where they are able to keep for long periods of time and supply a basic food staple.

Sources:

www.cdfa.ca.gov

www.nal.usda.gov/fnic/foodcomp/search/

www.healthypotato.com

www.mypyramid.gov

Updated: November 2009