



lesson topic: **Nutrition Comparison: Broccoli and Cauliflower**

source: **New York City Scope and Sequence for Science**; <http://schools.nyc.gov/documents/stem/science/k8sciencess.pdf>
Common Core Learning Standards for English Language Arts & Literacy; <http://www.corestandards.org/ELA-Literacy/RL/introduction-for-k-5>
Common Core Learning Standards for Mathematics; <http://www.corestandards.org/math>

overview

Students will use digital and print resources to collect data about the nutritional values of two common vegetables: cauliflower and broccoli.

objectives

In this lesson students will:

- learn how to read and interpret a nutrition label R5.1, R5.2
- graph and compare the vitamin content of two vegetables 3.MD
- understand that humans need a variety of foods in order to maintain good health 5.3a

materials

- Paper plates and plastic knives
- Cutting board and large knife
- Large uncut head of broccoli and cauliflower for demonstration
- Six bags potato chips with nutrition label (without chips)
- Colored pencils (5-6 baskets)
- Student garden journals
- Nutrition labels for broccoli and cauliflower for each student
- One poster sized label showing nutrition information of potato chip bag
- Examples of bar graph for red and green peppers
- One red and one green pepper

resources

"Botany on Your Plate: Investigating the Plants We Eat," by Barrett, White & Manoux. Burlington: National Gardening Association: 2008

learning activity

(45 minutes)

1. Introduction: Provide a bag of potato chips and the corresponding poster sized nutrition label.

2. Reviews how to read the label and discuss findings, which include:

- Serving size (often smaller than what we eat)
- Number of servings
- Meaning of % of Daily Value
- Nutrient values for the average healthy person
- Fat, cholesterol and sodium percentages
- Fiber, vitamins & nutrients

3. Group Activity: Hold up broccoli and cauliflower. Ask students to guess the number of calories and fiber as well as which plant offers the greatest vitamin content.

4. Show examples of a bar graph for red and green peppers and ask students to design a similar graph in their garden journals contrasting the nutritional elements of broccoli and cauliflower. Provide paper based or internet resources that allow students to find this information about the two plants.



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5. Discussion: Students will share their work and analyze their results.

6. Ask the students what surprised them the most about the data collected about the plants. Can they find evidence that indicates that one product being “healthier” than the other?

7. Point out that though both vegetables are from the Brassica family, their nutritional components are surprisingly different. How did the nutritional value of broccoli and cauliflower compare with the potato chips?

8. Reflection and Wrap Up: Ask students to write down at least one thing they learned and one new question they have the foods they eat. Ask students to share these ideas with the group.

9. End the session by providing a broccoli and cauliflower crudité.

creative activity

Create a “plant part” cook book as a class project. Students will work with parents or caregivers to choose a favorite recipe from home. Encourage students to note which plant parts are used in their recipes as well as research where these plant parts are grown. Host a cook book “release party” at your school. Ask your school cafeteria staff to prepare and serve featured recipes from the cook book. Be sure to check on tip sheet on creating recipes (*add hyperlink to tip sheet*).

extending the lesson

Host a weekly or monthly after school “cooking” class to promote healthy eating inside and outside of school. During the fall and spring feature a plant harvested from your school garden. See our fact sheet for some tips and best practices to cook with kids (*add hyperlinks to tip sheet*).