

# Food Science and Technology

**Curriculum Guide:** *Food Science and Technology*

**Unit:** IV. Food Selection and Consumer Health

**Unit Objective:**

Students will demonstrate an understanding of the nutritional facts on food labels and the nutritional requirements of a healthy diet by creating a chart where they will keep track of the foods they consume and writing a summary of their results.

**Show-Me Standards:** 1.8, HP5

**References:**

Food and Nutrition Information Center. U.S. Department of Agriculture and Agricultural Research Service. Accessed December 11, 2003, from <http://www.nal.usda.gov/fnic/>.

Food and Nutrition Publications. MU Extension. University of Missouri-Columbia. Accessed January 13, 2004, from <http://muextension.missouri.edu/explore/hesguide/foodnut/index.htm>.

*Food Science and Technology*. University of Missouri-Columbia, Instructional Materials Laboratory, 1994.

Nutrition and Health. University of Missouri Outreach & Extension. Accessed December 11, 2003, from <http://outreach.missouri.edu/main/nutrition/>.

**Instructional Strategies/Activities:**

- Students will engage in study questions in lessons 1 through 4.
- Students will complete AS 1.1, Comparing Snack Foods; AS 2.1, Nutritional Status; and AS 3.1, A Test for Vitamin C.
- Additional activities that relate to the unit objective can be found under the heading "Other Activities" in the following locations: p. IV-5, p. IV-14, and pp. IV-36-IV-37.

**Performance-Based Assessment:**

Students will work individually on their assignment. They will record what they eat and drink for 3 days (72 hr) in a chart they create. Each day they will provide totals for the nutrients (in grams) and vitamins and minerals (percentages) that they consume. Taking into account the totals, students will write a summary that evaluates whether they are meeting the daily

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nutritional requirements in each category and that provides recommendations on how they can improve their diet (e.g., eat more foods high in iron like peas or take a calcium supplement to meet the calcium requirement).

Assessment will be based on the overall quality of the summary and chart content. Spelling, grammar, punctuation, and capitalization also will be assessed.

### Unit IV—Food Selection and Consumer Health Instructor Guide

The instructor should assign the performance-based assessment activity at the beginning of the unit. Students will work toward completing the activity as they progress through the unit lessons. The assessment activity will be due at the completion of the unit.

1. Working individually, students will keep track of what they eat for 3 days (72 hr). NOTE: This time period may be adjusted to your preference and teaching calendar. Three days is suggested so that students may have a better understanding of the types of food they eat.
2. For each food students eat and drink, they will need to record the following information:
  - Daily nutritional information totals (in grams)
    - Calories
    - Fat
    - Cholesterol
    - Sodium
    - Carbohydrates
    - Sugar
    - Protein
  - Daily vitamin and mineral totals (percentages)
    - Vitamin A
    - Vitamin C
    - Calcium
    - Iron
3. Students should keep their records in chart form to make it easier to read and track. They can either draw their chart or create the chart in a computer program like Excel.
4. After the chart is complete, students will write a summary (maximum of 1 page) that answers the following questions:
  - How healthy is my diet?
  - What needs to change about my diet?
  - Does my diet meet the recommended percentages of vitamins A and C, calcium, and iron? If not, what foods should be added to my diet to increase the percentages?

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5. The final assessment score will be based on the overall quality of the summary and chart content. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.

**Unit IV—Food Selection and Consumer Health**  
**Student Handout**

1. Working individually, you will keep track of what you eat for a time period specified by your instructor. For each food you eat and drink, you will need to record the following information:
  - Daily nutritional information totals (in grams)
    - Calories
    - Fat
    - Cholesterol
    - Sodium
    - Carbohydrates
    - Sugar
    - Protein
  - Daily vitamin and mineral totals (percentages)
    - Vitamin A
    - Vitamin C
    - Calcium
    - Iron
2. Keep your records in chart form to make it easier to read and track. You can either draw the chart or create the chart in a computer program like Excel.
3. After the chart is complete, write a summary (maximum of 1 page) that answers the following questions:
  - How healthy is my diet?
  - What needs to change about my diet?
  - Does my diet meet the recommended percentages of vitamins A and C, calcium, and iron? If not, what foods should be added to my diet to increase the percentages?
4. Your final assessment score will be based on the overall quality of your summary and chart content. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.



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### Unit IV—Food Selection and Consumer Health Scoring Guide

Name \_\_\_\_\_

Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Content of Summary	<ul style="list-style-type: none"> <li><input type="checkbox"/> Addresses all questions</li> <li><input type="checkbox"/> Facts are accurate</li> <li><input type="checkbox"/> Suggestions for diet changes are valid</li> <li><input type="checkbox"/> Well organized</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 10.0	
Content of Chart	<ul style="list-style-type: none"> <li><input type="checkbox"/> Well organized</li> <li><input type="checkbox"/> Covers time period specified</li> <li><input type="checkbox"/> Includes all the elements required</li> <li><input type="checkbox"/> Neat and easy to read</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 12.5	
Technical Considerations (Written Aspects)	<ul style="list-style-type: none"> <li><input type="checkbox"/> Spelling</li> <li><input type="checkbox"/> Grammar</li> <li><input type="checkbox"/> Punctuation</li> <li><input type="checkbox"/> Capitalization</li> </ul>	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 2.5	
<b>TOTAL</b>								

Final Assessment Total \_\_\_\_\_/100 pts.

Comments:

