Nutrition & Wellness

Using Process Skills and Content Modules That Feature Critical Thinking and Practical Problem Solving Activities

Victoria Shahan, Editor
Family and Consumer Sciences Education

Vision Statement
To empower individuals and families across the life span to manage the challenges of living and working in a diverse, global society. Our unique focus is on families, work, and their interrelationships.

Mission Statement
To prepare students for family life, work life, and careers in family and consumer sciences by providing opportunities to develop the knowledge, skills, attitudes, and behaviors needed for:
- strengthening the well-being of individuals and families across the life span;
- becoming responsible citizens and leaders of family, community, and work settings;
- promoting optimal nutrition and wellness across the life span;
- managing resources to meet the material needs of individuals and families;
- balancing personal, home, family, and work lives;
- using critical and creative thinking skills to address problems in diverse family, community, and work environments;
- functioning as providers and consumers of goods and services;
- appreciating human worth and accepting responsibility for one’s actions and success in family and work life; and
- successful life management, employment, and career development.

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Nutrition and Wellness is an essential component of the Missouri Family and Consumer Sciences high school curriculum, preparing individuals to understand the related aspects of nutrition, health, and wellness. Competencies identified for this semester course enable students to construct meaning pertinent to nutrition, food choices, and good health. This guide was developed as a resource for family and consumer sciences teachers to assist them in addressing the competencies and meeting the needs of individual students.

Acknowledgments

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Deborah Pohl, Supervisor
Merilee Thoenen, Supervisor
1. Students will comprehend concepts related to health promotion and disease prevention.

2. Students will demonstrate the ability to access valid health information and health-promoting products and services.

3. Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

4. Students will analyze the influence of culture, media, technology, and other factors on health.

5. Students will demonstrate the ability to use interpersonal communication skills to enhance health.

6. Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.

7. Students will demonstrate the ability to advocate for personal, family, and community health.

The national Health Education Standards represent the work of the Joint Committee on National Health Education Standards. Copies of *National Health Education Standards: Achieving Health Literacy* can be obtained through the American School Health Association, Association for the Advancement of Health Education of the American Cancer Society. The information is also available online at: [http://www.aahperd.org/aahe/template.cfm?template=natl_health_education_standards.html](http://www.aahperd.org/aahe/template.cfm?template=natl_health_education_standards.html)
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<td>PS/B. Develop Effective Communication Skills</td>
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## Content Modules Used in This Guide

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<tr>
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<td>1. Demonstrate the ability to plan and prepare healthful meals and snacks using available resources (e.g., time, money, personal energy, skills).</td>
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<td>2. Identify safety and sanitation practices.</td>
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<td>3. Compare ways to select, store, prepare, and serve food for optimum nutrition.</td>
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<td>4. Identify programs that provide food assistance, nutrition and wellness services (community/government agencies, health organizations, community parks and recreation).</td>
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How This Guide is Organized

This is a curriculum guide. You will find competencies for the Nutrition and Wellness topic, general concepts, objectives, instructional strategies and assessments that support the competencies. Background information is included to help you in teaching the concepts, but is rather limited. You will find many links to online information and other resources that can supplement your own knowledge and resources for the material.

This guide begins with one module devoted to developing Process Skills needed for critical thinking and problem-solving. This module introduces students to the practical problem-solving approach used throughout this guide. This module provides the basis for building skills and applying the knowledge necessary for strengthening families and becoming responsible citizens. The Process Skills Module can be thought of as warm-up exercises for an athlete. The instructional strategies and assignments in this module develop thinking, reasoning, leadership and communication skills the students will use throughout the course as they explore specific information about family and individual health. The National Association of State Administrators for Family and Consumer Sciences (NASAFACS) developed a set of National Standards for Family and Consumer Sciences Education which was released in mid-1998. That document concludes that, “Process is a vehicle for obtaining, analyzing, and using content.”

Students work together differently from course to course, and from year to year. Therefore, some classes may need more warm-up work using the Process Skills Module before the students are comfortable working as cooperative group members.

A Critical Thinking Approach to Instruction and Assessment

In the opening pages of this guide you will find a Process Skills Competency List and the Nutrition and Wellness Competency List. The Process Skills are core skills and abilities students must master to become critical thinkers. The four Process Skills are aligned to the four Show-Me Standards Performance Goals and to the National Standards for Family and Consumer Sciences Education.

Each of the four units in Process Module 1: Exploring Process Skills includes references to the four process competencies. For example, Process Skill A is Managing Work and Family Life. There are three competencies listed for this Process Skill. Preceding each competency is a reference in parentheses. The reference PS/A-1 is for Process Skill A, competency 1. When you look in the front of this guide at the Process Skills Competency List you will again see PS/A-1. The “PS” is added to each process skill competency to help you keep it separate from the content competencies for the course.

You may choose to assess student performance of these Process Skills for each course you teach, or you may prefer to assess the skills less frequently. As students become familiar with these skills and progress through several courses which incorporate them, you may find that it is no longer necessary to thoroughly each all of the skills. Students may need only a quick refresher to be prepared to explore the content using critical thinking skills.
Introduction

Using This Curriculum Guide in the Classroom

Each unit begins with an Overview which includes the Practical Problem, an explanation of the competency(ies) this problem addresses, and Enabling Objectives for Competency Mastery which identify skills and knowledge students need to master each competency. Teacher Background Information provides the Rationale for the practical problem, while the Background section provides research, information and statistics for the teacher. References are included for the material used in developing each module. The teacher may consult the references for additional information or direct students to these sources for enrichment activities.

The section entitled Instructional Strategies builds on the topics presented in the Enabling Objectives for Mastery section. The Instructional Strategies can be thought of as the content or knowledge to be acquired as the student works to solve the practical problem. Three types of Summative Assessments are used to help the student explore and discover knowledge. Paper and Pencil assignments challenge the student to demonstrate understanding through written papers, reports, journal writing, etc., while Classroom Experiences provide opportunities to explore solutions through lectures from guest speakers, involvement in the community, through cooperative group projects and other classroom activities. Finally, Application to Real-Life Settings allows the student to apply the knowledge gained in the module to life experiences.

A variety of supplemental material is included at the end of each module. The pages labeled Activity Sheets may be completed by students individually or in work groups. These pages may be reproduced as needed for each exercise. Fact Sheets also may be reproduced for classroom use. These sheets may be used as handouts, overhead transparencies, or adapted as posters. In addition, there are a few pages labeled Instructor Notes. These may be used as reference materials for the teacher or reproduced for students at the teacher’s discretion. There are two specific styles of worksheets which require students to explore problems where more than one right answer may be possible. These worksheets are entitled Thinking It Over and SEARCH for Solutions. Teachers who currently use Ohio’s Work and Family Life materials are familiar with the REASON worksheets. These problem-solving worksheets are very similar and can be interchanged. For those who are new to the Critical Thinking model, SEARCH is an acronym for:

- **S** — State the problem to be solved.
- **E** — Examine the facts, ethical concerns and alternatives that exist.
- **A** — Analyze options and alternatives based on personal values.
- **R** — Review options and select the one best solution.
- **C** — Chart and start a plan of action.
- **H** — Highlight the outcome of your actions.

SEARCH for Solutions is a step-by-step process to help students work through problem solving and solution identification. The steps do not necessarily need to be taken in order. However, by focusing on each step when discussing the problem-solving process, students focus on the objective techniques used to reach a solution, rather than making subjective choices with little or no thought to the real problem or the consequences of the decision.
Preparing Students for Practical Problems

Students may need some orientation before beginning these activities. They may need help with vocabulary to understand words such as ethics, consequences and values. Some students may need coaching in being respectful to peers, or taking turns talking and actively listening to others, and in conflict management. Still other students may need reassurance that although there is not one right answer to some problems, there is one answer that is best for each person. An answer is the right answer when the student can defend it, place it in context with the individual’s values, and explain how the answer shows respect and consideration of others.

Missouri teachers can borrow on free loan, the Ohio Work and Family Life resource guides, the Missouri Family and Consumer Sciences resource guides for various courses and other curriculum development and resource materials from the Missouri Center for Career Education. Contact them at:

Resources@MCCE
TR Gaines 306, CMSU
Warrensburg, MO 64093
Phone: 660-543-8759, 800-392-7217
Fax: 660-543-8995
Email: resources@mcce.org
UNIT 1
MANAGING WORK AND FAMILY LIFE

Practical Problem:
How do I determine which strategies should be used to balance both work and family life to improve or maintain nutrition and wellness practices for me and my family?

Missouri Family and Consumer Sciences Competencies:
(PS/A-1) Define practical problems families and individuals face in everyday work and family life.
(PS/A-2) Identify the types of practical problems families and individuals frequently face.
(PS/A-3) Apply individual values and goals to decision-making.

Enabling Objectives for Competency Mastery:
1. Describe demands families face in managing work.
2. Describe demands individuals face in managing family life.
3. Compare the characteristics of technical problems, theoretical problems, and practical problems.
4. Define value system.
5. Explain how values influence decision-making.
6. Use planning and goal-setting strategies.

Teacher Background Information

Rationale
Balancing the demands of work and family life challenges students to understand and apply various resource management techniques. Students must be able to explain how time, money, and human ability can be managed to achieve goals. They also need to understand how to set realistic goals and make a plan to achieve those goals. Achieving balance takes more than management skills alone. Balance provides an internal sense of control and confidence. Personal values and goals must be added to management skills to create balance. A person may manage his or her time and money very well and not be happy with the life they are living.

Background
Busy lifestyles, financial constraints, and lack of knowledge about nutrition all contribute to poor eating habits for many Americans. Fortunately, habits can be changed. Balancing work and family life requires skill in management. By learning important management strategies students will be better prepared to make decisions about eating habits, food choices, and wellness goals. Wellness includes physical health,
mental/emotional health, and social well-being. The roles of employee and family member often overlap or collide. This can be a great source of stress on the individuals involved. The first step toward achieving balance is setting realistic goals. Goals allow individuals to focus their time, energy, money, and other important resources toward reaching the goal. The next step is to set priorities for reaching the goals. Which goals must come first, or which goals require attention every day? Establishing priorities will help determine what actions are needed first, or next.

Students need to understand the different types of problems that they must manage in their daily life. Practical problems are complex, often important information is lacking. Values influence the decisions made regarding practical problems. “How can I improve my physical strength” is a practical problem that may have more than one right answer.

In contrast, management problems relate more to getting something done. “What should I do to provide a healthful meal for my family?” is a management problem that can be worked through rather quickly.

A third type of problem is a scientific problem that involves trial and error to find a solution. All three types of problems play a role in balancing the demands we face in life. There are strategies that can used to work through each type of problem. The skill and confidence that comes with being able to manage in many situations will help students become better critical thinkers.

This unit will prepare students for additional management skills used later in the course. Be sure that students are comfortable with these management strategies before moving on to the next unit.

References:

Instructional Strategies
1. Describe demands families face in managing work. (Competencies PS/A-1, PS/A-2)
   a. Hand out copies of the case studies (Case Study Fact Sheet) in this unit. Work individually on all case studies, or group students to work cooperatively with one case study assigned per group. After the students have had time to read the information, use a Venn diagram to list all of the demands each family must balance. Divide the diagram into Work Demands and Family Demands.
2. Describe demands individuals face in managing family life. (Competency PS/A-1)

   a. Form a circle. Using three different colored, lightweight balls, throw one ball around the circle at least five times. At each stop, the individual name’s one responsibility she or he has at home each day. Repeat throwing one ball at least two more times. Now, add a second ball to represent family responsibilities. Throw only the second ball around a couple of times, with everyone naming a family responsibility they have each day. Now throw both balls together. After the balls have gone around a couple of times, add the third ball to represent work responsibilities students may face. (For students, work responsibilities may include a part-time job, school responsibilities, or volunteer commitments.)

   b. Discuss the definition of Resources relative to management using a “Chalk Talk” (writing the key information on the board). Resources can be anything used to achieve goals. Some resources cost money or must be provided. Other resources exist for anyone to use. Describe Personal Resources such as knowledge, talent, skills, time, and commitment. Give examples of how each resource can be used to solve a problem or manage in a situation. Next discuss Natural Resources such as air, water, electricity or fuel, plants, land, and wind which can be used to manage in some situations. Talk with students about Material Resources such as money, equipment, supplies, medicine, or technology. Lastly, discuss Community Resources such as government, media, parks, libraries, law enforcement, museums, businesses, schools, or service organizations. With the information about each type of resource showing on the board, complete Activity Sheet #1: Managing My

Questions for Discussion/Formative Assessment

- Are there times when work demands and family demands overlap?
- How can all of these demands be managed so that everything gets done?
- How do a person’s values influence the choices that person makes to balance work and family demands?
- What is likely to happen to a person who cannot balance these demands?
- What can happen when the members of the family disagree about how to balance work and family? Give some examples.

Questions for Discussion/Formative Assessment

- How difficult was it to juggle one ball at the beginning of this activity?
- Did it become more difficult when we added the additional balls? Why?
- How is this game like real life when individuals have to balance three types of demands at one time? Do we sometimes “drop the ball” on one of our responsibilities?
- Who sometimes suffers when we don’t juggle all of the balls well?
- How can this juggling act affect our health?
Managing Work and Family Life

Resources. After finishing the activity, discuss which type of resources were related to each situation.

3. Compare the characteristics of technical problems, management problems, and practical problems. (Competency PS/A-2)
   a. Use Fact Sheet #2: Problems, Problems, Problems to compare and contrast the different types of problems you are familiar with, and the different characteristics of each type of problem. Make a list of different types of problems that these strategies could help with.

   Questions for Discussion/Formative Assessment
   - Which strategy might you use to decide what to do about hosting a teacher appreciation reception? (Management)
   - Which strategy might you use to decide what to do after you complete high school? (Practical)
   - Which strategy might you use to decide what to do about improving your health and fitness level? (Practical)
   - Which strategy might you use to decide what to do about removing grass stains from your new pair of jeans? (Scientific)

   b. Discuss the FCCLA Planning Process. A copy of the FCCLA Planning Process is included in this unit. Of the three types of problem-solving strategies discussed earlier, which type is the FCCLA Planning Process like?
   c. It takes ‘good thinking’ to determine values, set goals, and prioritize actions to reach goals. Use Fact Sheet #3: Characteristics of Good Thinkers to examine the specific behaviors required to make good decisions for practical problems.

4. Define value system. (Competencies PS/A-1, PS/A-3)
   a. Use Activity Sheet #2: Developing a Value System Student to help recognize various types of values and reflect on how those values develop within an individual.

   Questions for Discussion/Formative Assessment
   - What are values and how are our values influenced?

   b. Use Student Activity Sheet #3: What Matters Most to Me to explore value systems. Discuss why each student is likely to have different answers to the questions. Discuss why all answers are correct.
   c. Hand out 3 x 5 index cards to all students and ask them to think of a value to add to the values already discussed. Post the additional values around the room.
5. Explain how values influence decision-making. (Competencies PS/A-2, PS/A-3)

a. Make predictions about the decisions each person would make in the following situations based on the values listed. Discuss how each person’s values might influence the decision. Would a person with a different value make the same decision in the same situation, or choose a different action?

<table>
<thead>
<tr>
<th>Value</th>
<th>Situation</th>
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<tbody>
<tr>
<td>Career</td>
<td>Jan receives a job offer for a promotion that will require her to move 450 miles away from her family. Should she accept this offer?</td>
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<tr>
<td></td>
<td>Ryan knows that his friend Danny stole some money from Ryan’s sister when he visited last week. He only took $5.00 and Danny is a good friend. Should Ryan tell his sister what he knows, or let it go?</td>
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<td></td>
<td>Kelley wants to be Junior class president. She earns A’s in most of her classes and has been on the honor roll for the past two years. She is worried if the other students think she is too smart, they may not vote for her as class president. Should Kelley let her grades slide a little so the other students will like her more and vote for her?</td>
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<tr>
<td></td>
<td>Adam’s friends are planning to all attend the same college after high school. They want to live together in the same residence hall for the first year and then all rent an apartment together later. They are pressuring Adam to join them in their plans. What should he do?</td>
</tr>
</tbody>
</table>

6. Use planning and goal-setting strategies. (Competency PS/A-3)

a. Hand out copies of the FCCLA Planning Process in this unit. Discuss each stage of the planning process.

Questions for Discussion/Formative Assessment

- What is a reasonable goal?
- How can you figure out what resources you have and what resources you need?
- Why is it important to write out a plan?

b. Set one realistic goal that can be achieved in one or two weeks. Use the FCCLA Planning Process to make a plan to achieve the goal. (Examples might include increasing physical activity to 20 minutes every day; cleaning up a room or closet to get organized; develop a resume and apply for at least two summer jobs; research four colleges and compare degree programs and costs.) Keep a journal of your progress toward the goal. Evaluate the outcome at the end of the time.
Summative Assessments

Paper and Pencil
1. Use the Lifetime Wellness Plan from the Implementation Handbook for Family and Consumer Sciences, Section 6, available online at: http://dese.mo.gov/divcareered/facs_curriculum.htm#Implementation_Handbook_for_FCS/ (Competencies PS/A-1, PS/A-3)
2. Use Activity Sheet #4: **Which Values Influenced These Decisions** to assess student’s understanding. A list of values is provided on Activity Sheet #2: **Developing a Value System** in this unit. (Competency PS/A-3)

Classroom Experiences
1. FCCLA Activity. Develop a student project focusing on setting goals for managing stress and balancing multiple demands. The project should demonstrate good planning and management skills. (Competencies PS/A-2, PS/A-3)

Application to Real-Life Settings
1. Write a one-page paper explaining one thing you would like to manage better in your own lives. It may be money, time, or other resources. Develop written goals and a plan of action to get started. (Competencies PS/A-2, PS/A-3)
2. Evaluate how time is spent each day, by creating a pie chart illustrating how much time is devoted each day to various activities. You may set the specific categories such as School, Physical Activity, Homework, Part-time Job, etc., or create your own individual categories. Write a paragraph summary of how effectively the time is used. (Competencies PS/A-1, PS/A-2, PS/A-3)
FCCLA PLANNING PROCESS
Identify Concerns

- brainstorm concerns
- evaluate listed concerns
- narrow to one workable idea or concern

Set a Goal

- get a clear mental picture of what you want to accomplish
- write it down
- evaluate it

Form a Plan

- plan how to achieve goal
- decide who, what, where, when, why and how

Act

- carry out project
- decide who, what, where, when, why and how

Follow Up

- evaluate project
- thank people involved
- recognize participants
Fact Sheet #1

**A Day in the Life...**

Ellen is a single parent with two children. Caleb is 7 years old and Kyle is 5 years old. Ellen’s great-grandmother also lives with them. Virginia is 79 and no longer drives, although she is able to care for herself and help out around the house with light tasks. Ellen has to juggle her time to take care of both boys and be available when her great-grandmother needs help.

Ellen is a real estate agent. She works for a company near where she lives and she is able to do some work from home. She also works on weekends, evenings, or holidays if a client calls and wants to see a piece of property for sale.

It is difficult to describe a typical day for Ellen since her work may not follow a predictable pattern. Here is one example of how her day unfolds:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 am</td>
<td>Wake up, shower, and dress.</td>
</tr>
<tr>
<td>6:45 am</td>
<td>Wake up boys and help them dress for school.</td>
</tr>
<tr>
<td>7:30 am</td>
<td>Prepare breakfast.</td>
</tr>
<tr>
<td>8:15 am</td>
<td>Drive boys to school.</td>
</tr>
<tr>
<td>9:00 am</td>
<td>Arrive at work to check messages, return phone calls, complete paperwork.</td>
</tr>
<tr>
<td>9:20 am</td>
<td>Receive a phone call from a client who wants to view a property over lunch.</td>
</tr>
<tr>
<td>9:30 am</td>
<td>Contact property owner to arrange showing over lunch; begins to review property information before showing.</td>
</tr>
<tr>
<td>9:50 am</td>
<td>Discover an important document on the property was not filled out earlier. Contacts the owner to set up earlier time to come by for the information.</td>
</tr>
<tr>
<td>11:00 am</td>
<td>Drive to the property to meet with the owner before the possible buyer arrives. Fill out missing paperwork and answer questions to update the owner on efforts to sell the home.</td>
</tr>
<tr>
<td>11:55 am</td>
<td>Clients arrive to view the property. They are from out-of-town and have a number of questions about the neighborhood, schools, and other similar homes. Ellen spends the next three hours driving them to two other possible homes to view. They decide to think about it and call her back later in the day.</td>
</tr>
<tr>
<td>3:30 pm</td>
<td>Leave the office to pick up the boys at school.</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>Caleb has a swimming lesson for 45 minutes. Take vacuum cleaner to the repair shop during the swimming lesson.</td>
</tr>
<tr>
<td>4:45 pm</td>
<td>Pick up Caleb and drive home.</td>
</tr>
<tr>
<td>5:30 pm</td>
<td>Client calls to discuss making an offer on one of the houses.</td>
</tr>
<tr>
<td>6:30 pm</td>
<td>Begins preparing dinner and talks with Grandma Virginia about her day. She realizes she never got a break for lunch.</td>
</tr>
<tr>
<td>8:30 pm</td>
<td>Tucks the boys into bed after their showers and a story.</td>
</tr>
<tr>
<td>9:00 pm</td>
<td>Collapses in a chair to take a break at the end of a long day.</td>
</tr>
</tbody>
</table>
Matteo and Justina own a local restaurant. They have one daughter, Mindy, who is 11. As small business owners, they have to be at the restaurant most of the time to make sure everything operates smoothly. The restaurant serves lunch and dinner Monday through Sunday from 11:00 am to 8:00 pm. They have two part-time assistant managers so Matteo and Justina do not have to work seven days each week.

Mindy plays softball in the summer and participates in gymnastics all year. Next year when she enters 6th grade, she will be allowed to stay home alone sometimes. For now, she comes to the restaurant after school or practice.

Each day is hectic as they balance family needs with inflexible work demands. It takes strong management skills and good communication. Here is a typical day:

7:00 am Wake up and get dressed
7:30 am Family breakfast and discussion of the day’s schedule. This is the only quiet time the family has each day to talk about school, work, and make plans.
8:00 am Justina drops Mindy off at school on her way to the bank. She runs errands if needed on her way to work. Matteo goes on ahead to the restaurant to check the inventory and place orders for the next couple of days.
9:00 am Justina arrives at the restaurant and begins setting up for the lunch crowd. Matteo is already beginning the food preparation. Various delivery trucks stop by with grocery orders, clean linens, and other supplies.
10:30 am One last inspection around the seating area to make sure everything is set for the doors to open.
10:50 am Open for lunch. A steady crowd will keep everyone busy until about 1:30. After that a few customers will arrive for late lunches, but they are not usually as hurried.
2:30 pm Justina is interviewing two applicants for a position helping in the kitchen. They arrive about half an hour apart.
3:30 pm Justina leaves to pick up Mindy after school.
4:00 pm Justina drives Mindy to gymnastics.
5:00 pm Justina and Mindy arrive at the restaurant just as the dinner crowd begins to arrive. Mindy picks up an after school snack from the kitchen and goes into the office to finish writing a book report that is due tomorrow. She also works on a map of the United States.
7:30 pm The dinner crowd is slowing down. Mindy helps out with small jobs like watering the plants and removing the daily special signs from the empty tables.
8:00 pm Justina and Mindy leave for home. Matteo will follow as soon as he has everything shut down and locked up.
Looking Out for Each Other…

Micha and her sister, Ciara, live with their grandmother. Micha is the oldest; she is 14 and she does a lot to help out around the apartment. They live in a large city where public transportation allows them to go in different directions to get everything done during the day. Grandma June works as a pediatric nurse at Community General Hospital. Several years ago, she volunteered for the night shift so that she could be at home in the afternoons when the girls got out of school. She used to pay a woman who lives in their apartment building to stay with the girls during the night. Now, Micha is old enough to manage on her own. Grandma June works from 11:00 pm to 7:00 am, getting home just in time to have breakfast with the girls before they leave for school.

Here is a typical day for Micha:

6:30 am  Wake up, shower, and make sure Ciara also gets ready for school.
7:30 am   Have breakfast ready when Grandma June gets home from work.
8:00 am   Micha and Ciara walk to the bus stop. They ride a public bus to their school.
8:40 am   School begins.
2:50 pm   School ends.
3:15 pm   Choir practice. Ciara usually waits at school with Micha.
4:00 pm   Both girls catch the bus home.
4:30 pm   Micha finishes her homework before dinner and helps Ciara gather research for a history paper.
6:00 pm   Grandma June and the girls sit down to dinner.
7:00–9:30 pm  Micha baby-sits for two small children. Mrs. White lives in Micha’s apartment building and takes a class at the community college that meets two nights each week. Micha baby-sits for her those two evenings.
10:00 pm  Micha gets ready for bed. Grandma June tucks the girls in each night before she leaves for work.
**Problems, Problems, Problems**

There are various types of problems that you are familiar with. Here are three that we will use in this class. Compare the similarities and differences among each. It is important to see how we use a different strategy to solve each type of problem.

<table>
<thead>
<tr>
<th>Technical or Scientific Problems</th>
<th>Management Problems</th>
<th>Practical Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the problem</td>
<td>1. Identify concerns</td>
<td>1. Identify the primary problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What do I know?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What do I need to know?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What should I do about this problem?</td>
</tr>
<tr>
<td>2. Collect relevant information</td>
<td>2. Set a goal</td>
<td>2. Evaluate facts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Determine reliability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Determine relevance</td>
</tr>
<tr>
<td>3. Form a hypothesis</td>
<td>3. Form a plan</td>
<td>3. Analyze alternatives and consequences for each</td>
</tr>
<tr>
<td>4. Experiment to test your hypothesis</td>
<td>4. Take action based on the plan</td>
<td>4. Select the best choice taking into account the consequences for self and others</td>
</tr>
<tr>
<td>5. Observe and record data</td>
<td>5. Evaluate the outcome of the plan of action</td>
<td>5. Outline a plan and take action</td>
</tr>
<tr>
<td>6. Draw conclusions based on your findings</td>
<td></td>
<td>6. Evaluate the results of actions taken</td>
</tr>
</tbody>
</table>
Characteristics of Good Thinkers

Good Thinkers demonstrate specific behaviors when they are making decisions about complicated practical, everyday problems. Practical problems are complex and often involve value judgments. We must be a Good Thinker to solve practical problems.

Here are some guidelines to help you. Good Thinkers are:

1. Complex thinkers who
   • Believe there may be many “right” answers or alternatives
   • Accept alternate points of view
   • Use and search for evidence to support or reject points of view
   • Anticipate and evaluate consequences of actions
   • Evaluate alternative actions using a variety of criteria

2. Reflective, persistent, and deliberate when necessary

3. Rational and can rise above emotional reactions to make decisions

4. Confident that thinking before acting is important

5. Intellectual and use standards and criteria to evaluate thinking

6. Ethical thinkers who
   • Are sensitive to ethical actions and aware of consequences for unethical actions
   • Are concerned about the interests of others as well as their own interests

Managing My Resources

Knowing what resources you have and how to use them is what management is all about. The management process involves making decisions about how to use your resources to reach your goals. Read each example below. Mark an “X” in the box to indicate whether you think the person used good management skills or poor management skills.

<table>
<thead>
<tr>
<th>Good</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bethany has a limited food budget. To save money, she clips food coupons and reads newspaper sale ads. She makes a list prior to grocery shopping.</td>
<td></td>
</tr>
<tr>
<td>2. Alonso wants to increase his physical activity to help lower his cholesterol. He plans to walk 20 minutes each day. As a single parent who wants to spend time in the evening with his children, he chooses to walk during his lunch hour.</td>
<td></td>
</tr>
<tr>
<td>3. Trisha likes to come home to a warm, cozy apartment. She leaves the thermostat turned to the same temperature whether she is at work or at home. That way she doesn’t have to wait for the apartment to warm up when she returns.</td>
<td></td>
</tr>
<tr>
<td>4. Charlie is handy at repairing broken things. He is retired now and lives on a fixed income. Twice a month, he visits a local child care center to collect broken toys. He repairs them during his spare time and returns them as good as new.</td>
<td></td>
</tr>
<tr>
<td>5. Mary Ann has a hectic and unpredictable work schedule and rarely prepares food at home. She prefers to eat out for lunch and dinner. This provides more flexibility in her schedule.</td>
<td></td>
</tr>
<tr>
<td>6. Jennifer’s community has a new recycling center for aluminum. She purchased a large trash can to keep in her garage just for old aluminum cans she finds. Once a week, she picks up trash in a local park and recycles the aluminum cans she finds. She is saving the money she earns from the recycling center to buy a new computer.</td>
<td></td>
</tr>
<tr>
<td>7. Parker is an FCCLA member who is in charge of the Parent’s Morning Out child care fund raiser. He has written out a work schedule for each member who is helping with the fundraiser. Each volunteer will have a work assignment as well. The assignments will include who is responsible for helping when parents sign their child in, who is helping prepare snacks, and who will organize fun activities.</td>
<td></td>
</tr>
<tr>
<td>8. Courtney likes to dry flowers from her mother’s garden by pressing the blooms between pages in a book. She has a shoe box nearly filled with her dried blooms. For her next birthday party, she decides to create her own party invitations by gluing the dried flowers onto construction paper.</td>
<td></td>
</tr>
<tr>
<td>9. Rusty has been saving to buy a digital camera. He almost has enough money saved for the purchase. He decides to go to the public library to research the consumer information on various brands before going to the camera store.</td>
<td></td>
</tr>
<tr>
<td>10. Leslie can’t afford to buy a costume for the party her friend is hosting, so she decides not to attend.</td>
<td></td>
</tr>
</tbody>
</table>
Developing a Value System

A Value System develops over time and can change over time. Our values are influenced by those around us and significant events in our life. A list of some values is provided below. Review the list and determine if this value is significant to you, and if so, who influenced it. Place an “X” in each column if that value is important to you. You may have no “X’s on some values and more than one “X” for others.

<table>
<thead>
<tr>
<th>Value</th>
<th>Family</th>
<th>Friends</th>
<th>Community/Neighbors</th>
<th>Teachers/Religious Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Career</td>
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<tr>
<td>Creativity</td>
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<tr>
<td>Education</td>
<td></td>
<td></td>
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<tr>
<td>Family Life</td>
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<tr>
<td>Forgiveness</td>
<td></td>
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<tr>
<td>Freedom</td>
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<tr>
<td>Happiness</td>
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<tr>
<td>Health</td>
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</tr>
<tr>
<td>Honesty</td>
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<tr>
<td>Integrity</td>
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</tr>
<tr>
<td>Intelligence</td>
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<td></td>
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</tr>
<tr>
<td>Justice</td>
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<td></td>
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</tr>
<tr>
<td>Knowledge</td>
<td></td>
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</tr>
<tr>
<td>Love</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Loyalty</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Physical Ability</td>
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<td></td>
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<tr>
<td>Pleasure</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Popularity</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Recognition/Fame</td>
<td></td>
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<tr>
<td>Religion</td>
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<tr>
<td>Service to Others</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditions</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Truth</td>
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<tr>
<td>Wealth</td>
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<td></td>
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<tr>
<td>Wisdom</td>
<td></td>
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</tbody>
</table>
What Matters Most to Me

Your values determine the actions you take, the goals you set, and the decisions you make in life. Values vary from person to person. Your values define what matters most to you. There is no right answer to these questions; the right answer is determined by what you believe is important.

1. List four valuable possessions that you would want to take with you if your home caught on fire.

   ______________________________   ______________________________
   ______________________________   ______________________________

2. List four values that you believe describe what it means to be an American.

   ______________________________   ______________________________
   ______________________________   ______________________________

3. List four values that you have as a teen that you did not have when you were in elementary school.

   ______________________________   ______________________________
   ______________________________   ______________________________

4. List six values that you would use to describe yourself to someone who is meeting you for the first time.

   ______________________________   ______________________________
   ______________________________   ______________________________
   ______________________________   ______________________________

5. List four values that you believe are important to your parents.

   ______________________________   ______________________________
   ______________________________   ______________________________
Which Values Influenced These Decisions

Your values help you make decisions about what to do and how to act. Read each situation below and list two values that you think would influence that person's decision.

1. Andrew told his friend Juan about a problem he was having at work. Bill wanted to know what Andrew said to Juan, but Juan decided to keep Andrew’s problem private.

2. Lance organized a group of students from his neighborhood to pick up trash in the park near them.

3. Bethany was hoping to spend the night with her friend Rayanna. Bethany’s parents said that if she did well on her science exam, she could sleep over. Rayanna offered to allow Bethany to look off her paper during the test to ensure she got a good grade. Bethany said she wanted to earn a good score on the test by herself.

4. Charity is training for the varsity track team. She runs twice a day and is careful to eat balanced meals.

5. Paige was invited to join her friends at the mall after school on Friday. She said she would like to join them another time, but Friday she had plans with her family to leave for a weekend camping trip.

6. No one saw Kelvin pick up a $20.00 bill from the cafeteria floor. On his way to class, he stopped by the office to turn the money in.

7. Sarah enjoys swimming. She swims after school two days a week at the community recreation center, and she leads a water aerobics class for senior citizens.

8. Zoe’s friends paid $70.00 for a popular new brand of jeans. Zoe chose to save more money by buying a less popular brand. She used the savings to buy a pair of new shoes also.

9. Tyler decided to go home soon after he arrived at a friend’s party because some of the people at the party were over 21 and brought alcohol with them.

10. When Ruth and Olivia came home from school, they are usually hungry. Ruth often chooses chips and soda for a snack. Olivia prefers to snack on fruit or yogurt.
Developing Effective Communication Skills

Unit 2
DEVELOPING EFFECTIVE COMMUNICATION SKILLS

Practical Problem:
How do I build and maintain respectful relationships?

Missouri Family and Consumer Sciences Competencies:
(PS/B-1) Identify characteristics of a respectful relationship.
(PS/B-2) Demonstrate effective communication skills.
(PS/B-3) Examine the consequences of actions for self and others.
(PS/B-4) Apply conflict resolution techniques when needed for consensus.

Enabling Objectives for Competency Mastery:
1. Describe the attitudes and behaviors that lead to a respectful relationship.
2. Analyze techniques to improve communication skills.
4. Examine the outcome of “right” and “wrong” decisions.

Teacher Background Information

Rationale
For families to be strong, the members must communicate effectively and with respect. Individuals must be able to express feelings, show concern and empathize with others. Managing conflict also is a critical skill in maintaining harmony among family members and others.

Effective communication skills are learned -- no one is born with them. Therefore, anyone can learn these skills through practice and patience. Effective communication skills are the foundation on which respectful relationships are built. Body language, listening, speaking, vocabulary-building, and reading are all part of communication. Students must understand how and when to use their skills in each area of communication.

A respectful relationship is based on trust, confidence, concern and support. A respectful relationship includes compromise and accountability. Each person must be responsive and sensitive to the others in the relationship.

An individual’s beliefs about what is right or wrong have a profound effect on decision-making. Determining right from wrong and understanding the consequences of a decision are necessary for a person to be able to participate in a respectful relationship. If there is no thought or no regard for the outcome of the person’s actions, then that person is not likely to be supportive, compassionate or trustworthy.
Background

To become strong family members, individuals must be caring, honest and compassionate communicators. No one is born with these skills -- they are learned. Some people learn only enough communication skills to get by -- they never become effective.

Communication is a process that involves sending messages, receiving messages and providing feedback. No response is a type of feedback; it demonstrates a lack of concern for the person sending the message and is not acceptable in a respectful relationship. There are several opportunities for a message to get lost, be misunderstood or ignored. Communication can be verbal or nonverbal, which also adds to a message’s ability to be lost or misunderstood.

Verbal Communication

Communication includes speaking clearly and honestly, listening actively and providing feedback. Each person in a respectful relationship takes turns in the roles of speaker and listener. The speaker in a respectful relationship uses I-messages in describing feelings, thoughts, observations and emotions. I-messages are not as threatening or intimidating as you-messages. For example, “I feel that my opinion is not important to you when you make decisions without discussing them with me,” is not as intimidating to the listener as, “You never consider my opinion when you make decisions.” I-statements might begin as, “I will...,” “I see...,” “I think...,” “I want...,” or “I feel...” I-statements express the speaker’s point of view while recognizing and respecting that the listener may have a different opinion.

Listening actively can be as difficult as speaking respectfully. There are a number of poor listening habits which can cause communication to break down and respectful relationships to suffer. Active listening involves being quiet while the other person is talking, watching the speaker’s nonverbal communications (looking the speaker in the eye and providing undivided attention), and being considerate of the speaker’s feelings and point of view.

Sometimes the speaker is clear, concise and honest, and the listener is paying attention and concerned. Yet, the message is still misunderstood. Communication can be thought of as a formula:

\[
\text{Speaking Respectfully} + \text{Listening Actively} = \text{Understanding}
\]

There are several techniques the active listener can use to clarify the message to help avoid misunderstanding. The first technique is for the listener to ask for clarification. The listener can use a statement such as, “As I understand what you’re saying, you...”

Another technique is for the listener to restate or rephrase the message. This shows the speaker that the listener is paying attention. For example, the speaker says, “I am frustrated with having to pick up dishes scattered throughout the house every night.” The active listener could reflect on what was said and rephrase the statement by saying, “You feel that I could do more to help out with picking up dishes around the house.” This allows both individuals to know if they are on the same track.

A third listening technique is to summarize the conversation. This is especially useful if the speaker has gotten off track or rambled in presenting a complicated message. The listener might say, “Let me see if I have this straight.”
Nonverbal Communication

Nonverbal communication is everything about the message that is not spoken. It includes posture, eye contact, facial expression, etc. Nonverbal communication differs from verbal communication in three major ways. First, verbal communication has a distinct beginning and end. Nonverbal communication is continuous. Second, verbal symbols, words, come to us one at a time and in sequence. Nonverbal symbols may be seen, heard, felt, smelled and tasted all at once. Third, verbal messages are sent consciously; thought is given to what is going to be said. Nonverbal messages, on the other hand, may be sent unconsciously. For example, a yawn by the listener may indicate boredom to the speaker, even though the listener is interested and actively listening to the speaker.

Communication Roadblocks

Effective communication can be stopped short with roadblocks. Refer to Roadblocks to Good Communication Fact Sheet for examples. Roadblocks may be used by someone who is uncomfortable with the conversation, impatient in getting to the point, or insecure in the relationship among other reasons. Try to recognize why the person is using a roadblock and deal with that problem first. Effective communication requires willing participants. One person cannot do it alone.

Conflict Resolution

Anger is a natural emotion that can be managed. People usually respond to anger based on their habits. However, habits can be changed with effort and willingness. Family members share a close environment and limited resources. Disagreements are common. When a disagreement is allowed to linger and grow, it can lead to a conflict. Avoiding a conflict does not make the tension go away or improve the tense situation. That is when strong communication skills are needed. Conflict can occur even in respectful relationships. Therefore, it is important to understand conflict resolution techniques that can help manage anger and resolve conflict.

Managing and resolving conflict is an integral part of the next unit, Learning to SEARCH for Solutions to Practical Problems. However, the basic steps are included here because open communication is the key to resolving conflicts. Caring, respectful relationships must be established so that conflicts can be considered from the perspectives of everyone involved. One-size-fits-all solutions do not exist in respectful relationships.

Typical methods people use to resolve conflict are:

- avoidance
- accommodation
- compromise
- competition
- collaboration

Not all methods are effective at resolving the conflict; they are just attempts at dealing with the problems. Fact Sheet #2: Coping with Conflict will provide more detail about each of these methods for resolving conflict.

Refer to the Fact Sheet #3: Steps for Managing Conflict for more information on dealing with conflicts.
Instructional Strategies

1. Describe the attitudes and behaviors that lead to a respectful relationship. (Competency PS/B-1)

   a. The way we feel about what happens in our lives plays a big role in our attitude. If we concentrate on the positive side of our life, we are said to have a positive attitude. On the other hand, if we see only the negative, our attitude becomes unpleasant.

   A positive outlook is important. It gives us the courage to face problems, and the power to take action. Unfortunately, we all encounter events that can shake a positive attitude. It takes inner strength to overcome these events.

   Review Fact Sheet #4: Guidelines for Effective Communication. Divide the class into pairs, with each pair making a presentation to the full class on any health-related topic. Each pair should discuss what their topic will be and how they will make their presentation.

   After all pairs make their decisions, re-read Fact Sheet #4: Guidelines for Effective Communication and discuss which communication techniques they used. Did they have any stumbling blocks in their discussions?

   b. Keeping communication open between parents and children requires practice and patience. Positive parent/child communication serves as a model for other types of relationships. Read the Fact Sheet #1: Roadblocks to Good Communication, and each mark the roadblocks you feel might be used with parents or others with whom you communicate. Discuss strategies to overcome these roadblocks.

2. Analyze techniques to improve communication skills. (Competencies PS/B-1, PS/B-2, PS/B-3)

   a. Explain “I-messages and you-messages”. Describe the communication problems and possible feelings of each person in the following situations. Suggest I-messages these characters could use to get a discussion started.

   Scenario 1 -- Stephanie is 14 and Devon is 12; they have been ‘only children’ all their lives. Now, their parents have married and they are step sister and
brother. Neither of them is excited about having a sibling and they are not looking forward to sharing space. Stephanie spends a lot of time using the computer in the family room. The computer was moved to the family room to make a bedroom for Devon. Stephanie complains that Devon watches TV too loudly for her to work on the computer. She blames Devon for taking away her spare room where she could work without interruption. How can these two work out a compromise?

Scenario 2 -- Andrea and Tricia are friends. They both work as lifeguards at the community swimming pool during the summer. After the pool closes each day all employees are responsible for cleaning up the changing rooms, concession area, and pool. It seems that almost every time the girls close the pool together, Tricia asks Andrea to cover for her by doing her share of the cleanup because she has to get home and can’t stay any later. What should Andrea do or say to Tricia about this situation?

b. Write a journal entry based on one of the barriers to communication and relate it to a situation you’ve experienced. The journal entry should describe both points of view as much as possible, and attempt to interpret the feelings of the other person, as well as describe your own feelings.

The entry should include a paragraph or more detailing how the situation actually ended. In the final section of the journal entry, describe what you might do differently if this situation occurred tomorrow, or why you would do the same thing as before if successful in resolving the situation.

c. Discuss with the class how it feels to be treated with respect. Create a list of words and phrases that describe those feelings. Discuss the negative feelings that accompany disrespect and list words and phrases for these feelings.

d. Negative communication lowers our self-esteem. Negative comments lower self-esteem more rapidly than positive comments can build it back. Demonstrate how this can happen in a parent-child relationship. Use two large clear containers such as an empty, one-gallon, ice cream container. Fill one container with dried beans. One student serves as a ‘teenager’ and one student serves as a ‘parent.’ Give the ‘teenager’ a 2-cup measure and the ‘parent’ a 1/4 measuring cup. Read A Typical Day in the Life of a Teen Case Study aloud to the class. Each time the ‘teen’ hears a negative message, the teen will scoop out a 2-cup measure of beans into the second container.
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Each time the ‘parent’ hears a positive statement, the ‘parent’ will put back a 1/4-cup scoop of beans into the original container. At the end of the case study, discuss the effect of the negative messages on the ‘teens’ self esteem.

Questions for Discussion/Formative Assessment
- How quickly did our teen go from ‘full of self-esteem’ to ‘out of self-esteem’?
- What will happen the next day when the teen begins the day low on self-esteem?
- What might the teen say or do to help the parent understand how their words hurt?

3. Review conflict management strategies. (Competencies PS/B-1, PS/B-3, PS/B-4)
   a. Use the Fact Sheet #2: Coping with Conflict, as a discussion starter about why it is difficult to resolve conflict.

Questions for Discussion/Formative Assessment
- What types of conflicts can occur among family members?
- What types of conflicts can occur among friends?
- How do some conflicts get out of hand?
- What can be done after a conflict begins?

b. Write a journal entry, “What Makes My Family Strong.” List strengths and give examples to illustrate points. At least one point should focus on how you resolve conflict in your family. Is this a strength or an area that needs some improvement?

4. Examine the outcome of “right” and “wrong” decisions. (Competencies PS/B-1, PS/B-2, PS/B-3, PS/B-4)
   a. Determine the meaning of each of the terms listed on Activity Sheet #1: Definitions as you will use them throughout this class.

Questions for Discussion/Formative Assessment
- Do you think there is always a right or wrong answer to a practical problem? Explain.
- What information must you have to make decisions that affect others?
- Who can you turn to for help with these decisions?

b. Work in small cooperative groups. Read about current events in the newspapers or news magazines. Identify a story based on an ethical problem. Make an informational poster that reproduces the article and includes a description of the ethical dilemma. The poster does not need to answer the right or wrong question, rather it should present all aspects of the issue for consideration. Other good examples of how one person’s actions
Developing Effective Communication Skills

affect others are often featured in celebrity news, sports stories, human interest articles and political news.

**Questions for Discussion/Formative Assessment**

- **What is the ethical issue in question? Why is this issue a dilemma?**
- **List as many possible solutions or actions as you can. Don’t decide which solutions are “right” or “wrong,” just list all of the alternatives you can.**
- **How would a person’s values affect which solution they chose?**
- **Can a “right” answer for one person be the “wrong” answer for another? Explain.**

c. Invite a guest speaker from a shelter or counseling organization to talk about the consequences of people using inappropriate ways to resolve conflict. Domestic violence is one difficult subject, but a common outcome when conflict is handled in an inappropriate manner. Ask the speaker to share ideas for using respectful communication techniques to resolve difficult family problems.

d. Review Fact Sheet #3: **Steps for Managing Conflict** with students. Divide the class into pairs. Use Activity Sheet #2: **Case Studies** for role play. Each pair takes on the role of one of the characters. Use the strategies from the Fact Sheet to work out a solution for each problem.

**Summative Assessments**

**Paper and Pencil**

1. **FCCLA Activity.** Use the Families First program manual for instructions on creating a Family Council and Family Communication Contract. This might be expanded into a Power of One project. (Competencies PS/B-1, PS/B-3, PS/B-4)

2. Using Case Studies Activity Sheet #2 as a guide, write your own case study of a conflict management scenario. The scenario should be fictional, but it can be loosely based on real life. Write 3-5 discussion questions to help the characters in your scenario begin to work out their differences. (Competencies PS/B-1, PS/B-3, PS/B-4)

**Classroom Experiences**

1. Divide into groups of four students. Using Case Studies of poor communications in this unit or the scenarios created in Paper and Pencil Assessment #2 above. Allow time for the team to read, discuss, and answer the questions. Have one reporter or team representative read the case example to the class and provide the team’s responses. Discuss as a class how each person in the case example might take some action to improve the situation. (Competencies PS/B-1, PS/B-2, PS/B-3, PS/B-4)

2. Have teams discuss the actions that each character should take next. Role play the conversation that the team believes should follow this situation. This follow-up conversation should demonstrate respectful communication skills by each person,
and offer a solution to resolve the previous problem. (Competencies PS/B-2, PS/B-3, PS/B-4)

Application to Real-Life Settings

1. Volunteer for one of the community agencies providing assistance to teens. Talk with teens that have faced difficult decisions and consider the consequences of their actions. (Competencies PS/B-2, PS/B-3)

2. FCCLA Activity. Develop a workshop to teach families about conflict management skills. Ask local experts to teach youth and parents family coping skills, communication skills and conflict management techniques. (Competencies PS/B-1, PS/B-2)
Roadblocks to Good Communication

Some types of behavior can prevent people from communicating and building strong, caring relationships. The following are a few examples of statements or comments that illustrate barriers to good communication.

1. Blame
   “You never want me to have fun with my friends.”

2. Insults
   “It was your stupid idea to come to this restaurant.”

3. Put Downs
   “When are you ever going to grow up?”

4. Interruptions
   “Can this wait until after football practice?”

5. Sarcasm
   “I suppose you remembered my birthday all by yourself?”

6. Commands
   “I’m not asking you for your opinion. I’m telling you what I’ve decided.”

7. Threats
   “If you want me to buy you a computer for graduation, you will speak to me in a civil tone.”

8. Make Excuses
   “It’s not my fault that we never have time to shop for your prom dress.”

9. Create Diversions (Change the Subject)
   “I know you promise to keep your grades up if you can work part-time. I seem to remember that you promised to take care of the dog we adopted two years ago, and I always have to feed him before I leave for work.”

10. Lecture
    “You may think you know what you’re getting into. But the problem is more complicated than you understand. It’s like the time…”

11. Judge
    “You can’t wear your hair that way and expect anyone to hire you.”

12. Withdrawal
    “Sure. Uh-huh.”
Coping with Conflict

Avoidance
Appropriate when
• The conflict is small and not worth a confrontation
• Time is needed to calm down
• Time is needed to gather more information

Inappropriate when
• the decision is important
• a decision is needed quickly
• postponing will only make matters worse

Accommodation
Appropriate when
• Satisfies the immediate need
• Allows the group or individuals to move on to more important things

Inappropriate when
• the decision is important
• an important issue is at stake

Compromise
Appropriate when
• Both parties are willing to give in on some points for the overall decision
• Both sides are willing to give something to come to a quick end to the conflict

Inappropriate when
• one person asks too much from the beginning, so that a compromise is still one-sided
• one person lacks the integrity to honor the deal agreed to

Competition
Appropriate when
• Winning at another’s expense does not cause harm (this rarely occurs)

Inappropriate when
• it lowers cooperation
• it divides the people so that future relationships are negatively affected

Collaboration
Appropriate when
• Individuals trust and respect each other
• There is time to fully discuss each side
• Those involved want the best solution for everyone involved
• Individuals are prepared to make sacrifices they believe will be the good of all

Inappropriate when
• there is not enough time to fully discuss and evaluate options
• trust, respect, or communication is weak among those involved
Steps for Managing Conflict

When individuals interact in a close personal relationship such as the family environment, conflict is sure to occur at times. Dealing with the conflict in a caring manner creates a win-win situation for those involved. The steps below can help you identify the win-win solution to your conflict.

1. Take genuine interest in reaching a solution. Select a neutral location to talk that is free from distractions or interruptions. State your commitment to working out a solution. As you begin to discuss the problem, keep the focus of the discussion on the issue. (Review Fact Sheet #1: Roadblocks to Communication, to identify counterproductive behavior.)

2. Alternate turns talking and listening. State your opinion, feelings and expectations clearly. Listen without interrupting (verbally or nonverbally). Ask questions to clarify that you understand the other person’s feelings. Work through this critical step until everyone agrees they understand the other perspectives.

3. Create a list of all possible solutions. Do not evaluate or judge any option at this time. Merely identify all possible solutions to the problem.

4. Discuss each possible solution and the consequences. Consider how effectively each option would solve the problem taking into account the goals and values of those involved. The goal is to identify a solution that is acceptable to everyone. One person should not cave in to satisfy another, bulldoze over others to get their way, or put up roadblocks that prevent any solution from being considered. Compromise may be one way to find a workable solution. If a mutually agreeable alternative is found, move on to the next step. If not, go to step 6.

5. Chart your plan of action based on the solution identified above. Determine and agree on the actions to be taken by each person involved. Question, clarify, and commit to the solution.

6. Take a break. Set a time to resume talks and reflect on alternatives. A new solution may appear that suits everyone.

When all else fails, it may be helpful to agree to talk with a neutral party or mediator. Remember that the most important thing is to preserve the relationship. Giving in or giving up undermines the open, honest communication required for a respectful relationship. Conflict is natural but it does not have to be deadly to a relationship.
Guidelines for Effective Communication

In order to solve problems, it is important to be able to discuss problems openly and respectfully. Effective communication involves both listening and speaking. Good listeners show an interest in what the other person is saying. Here are some guidelines, and how you might use them to improve your communication skills.

1. Draw a mental picture of what the other person is saying.
   Ask questions to help you complete the picture in your mind. This will let the other person know that you are taking an interest in his or her topic.

2. Learn something new from the speaker.
   Take the role of a student trying to learn something new, so that your adolescent becomes the teacher.

3. Stay focused on the other person.
   Do not use this time to interrupt with one of your own stories.

4. Be an active listener.
   An active listener summarizes the speaker’s statements to check for understanding. Ask questions to keep the conversation moving. By asking for more details, you will help to stay focused on the topic.

5. Match the speaker’s emotional state, unless it is hostile.
   You will help the speaker feel accepted if you match his or her mood. This also shows empathy, or reassurance that you understand and can identify with the speaker.

6. Withhold advice unless you are asked to give it.
   Hear the other person out. Do not interrupt or add your opinions until the speaker has finished. Your job is to listen with understanding, not make judgment calls.

7. Put yourself in the other person’s shoes.
   Try to understand your adolescent’s perspective. This shows that you respect his or her point of view, even though you may not agree with it.

8. Think before you speak.
   You may want to count to ten before you respond. This will create an opportunity for you to compose yourself and avoid a heated discussion.

9. Encourage the other person.
   Even when discussing sensitive or emotionally charged topics, let your adolescent know that you still care about him or her. Think of something positive.

10. Be pleasant.
   Keep the conversation positive by talking about how you might want to solve the problem. Don’t get entangled in past mistakes. Look for the positive side of the message, and keep the conversation productive and constructive.

Communicating with Your Teen  HYG-5158-96  Shannon L. Sachs
Developing Effective Communication Skills

Competencies PS/B-1, B-2, B-3 and B-4
Activity Sheet #1

Name _________________________

Definitions

Compromise: _______________________________________________________
________________________________________________________________
________________________________________________________________

Conflict: _________________________________________________________
________________________________________________________________
________________________________________________________________

Consequences: ___________________________________________________
________________________________________________________________
________________________________________________________________

Core Beliefs: _____________________________________________________
________________________________________________________________
________________________________________________________________

Empathy: _________________________________________________________
________________________________________________________________
________________________________________________________________

Ethical Behavior: _________________________________________________
________________________________________________________________
________________________________________________________________

Respectful Relationship: ___________________________________________
________________________________________________________________
________________________________________________________________

Sympathy: _________________________________________________________
________________________________________________________________
________________________________________________________________
A Typical Day in the Life of a Teen

Each time the ‘teen’ hears a negative message, the ‘teen’ will scoop out a 2-cup measure of beans into the second container.

Each time the ‘parent’ says a positive statement, the ‘parent’ will put back a 1/4-cup scoop of beans into the original container.

6:00 a.m. Come on, it’s 6:00. You’ve got to get up.
6:05 a.m. Hurry up and get dressed.
6:06 a.m. They’re probably under your bed. I told you if don’t put your clothes in the laundry, I’m not going to wash them.
6:15 a.m. Let’s go. Quit poking around. Wash your face, comb your hair, and get your teeth brushed.
6:20 a.m. I won’t be home until later tonight. Have you got the house key, your glasses, and your lunch money?
6:25 a.m. Here comes the bus. Have you had anything for breakfast? Do you have everything?
6:27 a.m. Have a good day. I love you. Try to leave that crabby attitude here.
6:00 p.m. Hi, I’m home. How are you? Did you have a good day? Why isn’t the dishwasher empty? Have you fed the dog and cat?
6:10 p.m. Put this book bag away. How many times do I have to tell you not to leave it lying here?
6:30 p.m. Dinner’s ready. Come on, let’s eat.
6:35 p.m. How many times do I have to tell you to come and eat? Turn that computer off and let’s go. I don’t want to keep yelling for you. Besides, you’re not allowed to be on it anymore tonight!
6:40 p.m. You’re going to have to start carrying your share of the load. I’m not your slave and I don’t have time to do all the work around here. It won’t hurt you to do a few chores.
6:45 p.m. If you’re finished eating, unload the dishwasher. I’ve already asked you to do it once.
7:00 p.m. Do you have homework? I told you not to use the computer anymore tonight.
7:15 p.m. Turn the TV down. What in the world is that anyway? I’ve told you a million times not to leave empty food containers lying around. I don’t collect them. Do you like to hear me complain, is that why you leave the empty containers sitting out when you’re done with them?
9:00 p.m. It’s time to get ready for bed. Do you have your homework finished, because you were supposed to finish your homework before you could watch tv?
9:15 p.m. Good-night. I love you.
Developing Effective Communication Skills

Process Module 2

Competencies PS/B-1, B-2, B-3, and B-4
Activity Sheet #2 continued

Name ___________________________

Keisha and Her Father

Read the following situation, and then answer the questions to improve their communication in a caring, respectful manner. Describe the communication problems and possible feelings of each person.

Keisha works hard as a volunteer at the hospital. She plans to attend nursing school when she graduates from high school, and she likes getting to know nurses at the hospital and helping patients. She is a good student and usually makes the honor roll. Her parents do not allow her to go out of the house after 10:00 p.m. on school nights.

The hospital is hosting a special fund-raising event on Tuesday. The event begins at 7:30 and will last until at least 11:30. The event will include dinner and a silent auction to raise money for new equipment. Keisha is invited to the dinner if she can stay and help with the silent auction.

When Keisha asks her father for permission to attend the hospital event, he asks when she will be home. She replies that the whole event will probably last until 11:30, and she explains that she will need to stay until the end to help with the silent auction. Her father says no without even looking up from the evening newspaper. Keisha bursts into tears.

She screams, “You never allow me to do anything” and she runs to her room and slams the door.

1. Describe how each person is likely to feel at the end of this conversation.

Keisha: __________________________________________________________
__________________________________________________________________

Her Father: ________________________________________________________
__________________________________________________________________

2. Without taking either side, describe the behavior of each person and the way that behavior influences the other person’s response.

Keisha: __________________________________________________________
__________________________________________________________________

Her Father: ________________________________________________________
__________________________________________________________________

3. What were the consequences that resulted from each person’s actions? Suggest the next step each person should take to reopen the lines of communication in a respectful manner.

Keisha: __________________________________________________________
__________________________________________________________________

Her Father: ________________________________________________________
__________________________________________________________________

4. Who created this barrier? Who should remove the barrier?
Stu and Corey have been great friends for as long as they can remember. They live in the same neighborhood, and hang out together most of the time in school and after school. They spend a lot of time in Corey’s garage ‘fixing’ things. They fix bicycles, stereo equipment, and lots of other things. Stu is very good at repairing mechanical stuff, and Corey is very creative at figuring out how to make new parts from old materials.

They decide to enter the school science fair as a team. They agreed on a project and began their work. Toward the end of the project they got into an argument about how to finish their entry. Stu had an idea, but Corey wanted to try something different. Finally, they decided to wait until the next day to make a decision. They would think about each other’s idea overnight.

Later that night, Corey went to the garage and finished the project using his idea. He knew once Stu saw it, he would love it. Stu just didn’t understand. When Stu came over the next day and discovered that Corey had finished the project without him, he was furious.

Stu threw the project on the garage floor and it broke into several pieces. He stormed away yelling at Corey that their science project was finished and so was their friendship!

1. Describe how each person is likely to feel at the end of this conversation.
   
   Stu: ______________________________________________________________
   ______________________________________________________________

   Corey: _____________________________________________________________
   ______________________________________________________________

2. Without taking either side, describe the behavior of each person and the way that behavior influences the other person’s response.

   Stu: ______________________________________________________________
   ______________________________________________________________

   Corey: _____________________________________________________________
   ______________________________________________________________

3. What were the consequences that resulted from each person’s actions? Suggest the next step each person should take to reopen the lines of communication in a respectful manner.

   Stu: ______________________________________________________________
   ______________________________________________________________

   Corey: _____________________________________________________________
   ______________________________________________________________

4. Who created this barrier? Who should remove the barrier?
Arianna and Desiray are sisters. They help their parents raise vegetables to sell at the community Farmers’ Market. They work at the Market every Saturday. It is a lot of responsibility, but they rely on the income. Besides, working together as a family is fun.

The girls have been saving part of their income to pay for a car. Arianna is 17 and Desiray will turn 16 in the fall. They plan to buy a car next summer, so they are hoping to earn a lot of money this summer.

Arianna plays basketball at her school, and she hopes to earn a scholarship to play basketball in college. Next year is her senior year and she knows that she will have to have a great season to stand out to the recruiters and coaches. One day after practice, Arianna’s coach tells her about an opportunity working with a new community project for “At-risk” youth during the summer. She could be part of a group of volunteers who meet with the sixth-grade students to coach them in basketball and help them through some difficult times.

This opportunity could help Arianna get a scholarship for college, and it would be doing something that benefits the community. The problem is that it conflicts with her work schedule at the Farmer’s Market. She is excited to tell Desiray about the opportunity.

Arianna was not prepared for Desiray’s reaction. “Arianna,” she said, “You obviously don’t care about our family. How can you put your own goals first? We were supposed to work together this summer to earn money for a car.”

1. Describe how each person is likely to feel at the end of this conversation.
   Arianna: _________________________________________________________
   Desiray:  _________________________________________________________

2. Without taking either side, describe the behavior of each person and the way the behavior influences the other person’s response.
   Arianna: _________________________________________________________
   Desiray:  _________________________________________________________

3. What were the consequences that resulted from each person’s actions? Suggest the next step each person should take to reopen the lines of communication in a respectful manner.
   Arianna: _________________________________________________________
   Desiray:  _________________________________________________________

4. Who created this barrier? Who should remove the barrier?
Sidney and Miranda have been dating for eight months. They do many things together and share the same interests. The one interest they do not share is theatre. Miranda loves watching plays and attending performances. Sidney doesn't enjoy live theatre at all.

Whenever Miranda invites him to go to a play, Sidney suggests they do something else. Miranda understands that Sidney isn't a fan, so she invites three of her other friends to go to a play this weekend. Sidney gets angry because Miranda wants to spend time at a play with her friends rather than go out with him.

Sidney accuses Miranda of not really caring about him. He says if she cared about his feelings she would do something else that they both enjoyed. Miranda yells back that he would go to the play if he had any concern for her feelings.

1. Describe how each person is likely to feel at the end of this conversation.

   Sydney: ___________________________________________________________
   Miranda: __________________________________________________________
_________________________________________________________________

2. Without taking either side, describe the behavior of each person and the way that behavior influences the other person’s response.

   Sydney: ___________________________________________________________
   Miranda: __________________________________________________________
_________________________________________________________________

3. What were the consequences that resulted from each person’s actions? Suggest the next step each person should take to reopen the lines of communication in a respectful manner.

   Sydney: ___________________________________________________________
   Miranda: __________________________________________________________
_________________________________________________________________

4. Who created this barrier? Who should remove the barrier?

_________________________________________________________________
UNIT 3
SEARCH FOR SOLUTIONS TO SOLVE PROBLEMS

Practical Problem:
How do I solve practical problems related to individual and family health in an ethical, respectful and responsible way?

Missouri Family and Consumer Sciences Competencies:
(PS/C-1) Demonstrate practical problem-solving skills.
(PS/C-2) Evaluate consequences of possible solutions for self and others.
(PS/C-3) Compare and contrast practical problem-solving techniques to other problem-solving strategies.
(PS/C-4) Propose ethical solutions to practical problems.

Enabling Objectives for Competency Mastery:
1. Define a practical problem.
2. Define ethics and apply to solving practical problems.
3. Develop solutions for practical problems which demonstrate concern for self and others.

Teacher Background Information

Rationale
Making decisions about nutrition and wellness requires the use of practical, problem-solving skills. Realizing there are consequences for the actions taken helps teenagers, as well as adults, to take responsibility for choices being made.

In Discovering and Exploring Habits of Mind, Costa and Kallick (2000) identified 16 types of behavior that contribute to building strong problem-solving skills. The authors suggest that students must practice each of these skills and become proficient at selecting which habit to draw on when solving a problem. All habits or skills are needed, but at different times. The 16 habits of mind are:

1. Persisting
2. Managing impulsivity
3. Listening with understanding and empathy
4. Thinking flexibly
5. Thinking about thinking (metacognition)
6. Striving for accuracy
7. Questioning and posing problems
8. Applying past knowledge to new situations
9. Thinking and communicating with clarity and precision
10. Gathering data through all senses
11. Creating, imagining, innovating
12. Responding with wonderment and awe
13. Taking responsible risks
14. Finding humor
15. Thinking interdependently
16. Remaining open to continuous learning
Costa and Kallick (2000) advise teachers that these 16 behaviors must be taught, assessed, and reinforced throughout the curriculum. The authors suggest that, “...new behaviors must be labeled and discussed.” When those behaviors are repeated they should be recognized and rewarded.

Students must be taught what the problem-solving behaviors are, when and how to use the skills, and how to apply the skills to other, similar situations when they occur. Gick and Holyoak (1980) conducted a study of students’ problem-solving skills using analogy to transfer problem-solving strategies from situation to another similar situation. A control group was given one problem to solve with no guidance or preparation. Another group of students solved one problem and then were given a second problem similar to the first one. The third group of students solved one problem and then was given a second similar problem. They were told that the solution to the first problem would help them solve the new problem.

In the first group that received no guidance, 8% of the students were able to solve the problem. Thirty percent of the second group, which received coaching on one problem and then was given a second, similar problem, was able to solve the second problem. An astonishing 92% of the members of the third group which received a practice problem and a hint were able to accurately solve the problem.

This is overwhelming evidence that merely imbedding a problem-solving skill in a lesson does not help a student internalize the skill for future use. Teachers must describe the problem-solving process, link the process to practical problems that students face, and reintroduce the process in analogous (similar) examples.

Students must learn that often there will be more than one right answer for some types of problems. Depending on the situation, their own belief system, and the circumstances at the time, the “right” choice may be different for them than someone else in their family or another person down the street. When students begin to think through a situation they will make a better decision based on information gathered rather than a spur-of-the-moment decision or a decision made under pressure from others.

Problems can be divided into two groups:

1. Well-defined problems are based on the information already known and a set of procedures already known, the single correct solution can be determined. For example, you have $17 and you want to buy something that costs $26, how much more money will you need? There is only one correct solution to this problem.

2. Ill-defined problems include uncertainty. Some important information may be missing, or more than one solution may be possible. For example, what career will I pursue?

How students go about solving a problem depends in part on what type of problem they are facing. To solve a scientific problem, students must first define the problem and form an hypothesis. They next test the hypothesis; observe and record data; then draw conclusions based on the information you discover. A “right” answer exists that will always solve this problem. For example, when you turn the key in the ignition, the car does not start. There is a specific problem that must be discovered and corrected.
Theoretical problems are solved first by stating the problem, then selecting ideas, facts, and other information. Evaluate the pros and cons of all opposing arguments, then choose the alternative that has the strongest support. “Right answers” generally do not exist, individuals must develop an opinion about the appropriate solution based on their beliefs.

To solve a practical problem students recognize the base problem. They must evaluate the quality of information and the relevance of information; then analyze alternatives and consequences of every option. Select the best choice from among all possible choices and take action. Finally, students will evaluate the outcome of the action in solving the problem.

Decisions are made every day regarding nutrition, health and personal wellness issues. From the time a student is awake until fast asleep at the end of the day, decisions are made as to food selections, when or where to eat, physical activity and exercise, social decisions, as well as emotional choices. There may be community issues and career choices that affect health. Using the practical problem solving approach involves value questions that require core beliefs and rational judgments. This approach helps students to assess information more accurately and to realize there may be many possible answers. The one right answer for an individual is the one that fits into their own belief system. The student must understand the consequences of the “best” choices and seek the choice that does not hurt themselves or anyone else.

References:
1. Define a practical problem. (Competencies PS/C-1, PS/C-3)
   a. Refer to Activity Sheet #1: SEARCH for Solutions in this unit. Discuss each step in the problem-solving process. As a class, write a definition for a practical problem. Discuss each word to determine what it means in the overall definition. Practical problems are usually ill-defined, involve judgments, and often have multiple “right” answers.
   
b. Create a chart listing issues that could be considered everyday, practical problems. Place a star beside each problem that could involve ethical decisions. Refer to Fact Sheet #1: Ethical Decisions vs. Core Beliefs and place the number(s) of the core beliefs beside the star each may relate to.

   c. Consider this practical problem:
      Alyssa gets up at 6:30 every morning for school. She has a 40-minute bus ride to school, so she leaves home by 7:15 a.m. each day. She isn’t really hungry for breakfast that early in the morning, and there isn’t much time to prepare a meal and still get dressed. When she gets to her first class she is usually hungry and unable to concentrate on the subject.

   d. Use Activity Sheet #2: Developing and Using Habits of Mind to Solve Practical Problems to explore habits that improve practical problem-solving skills. Share with the class one habit used often and one habit for improvement. Discuss some ideas for how to improve a habit (or create a habit).

   e. Compare and contrast Well-defined Problems and Ill-defined Problems using a graphic organizer such as a Venn diagram. Use Activity Sheet #3: Thinking It Over to illustrate one type of problem-solving. Is this a Well-defined Problem or an Ill-defined Problem? Why?

Questions for Discussion/Formative Assessment
- Which core values are more frequently challenged in seeking to maintain a healthy lifestyle?
- What can be done to face these challenges?
- Identify some possible resources that can offer information and alternatives when the various types of problems occur.

Questions for Discussion/Formative Assessment
- What is the practical problem?
- Which core values are questioned by this problem?
- Will any other individuals be affected by actions taken to solve this problem?
- List all the possible solutions for this problem.
Teacher Note: Solution to the Nine Dot Problem follows. This is a well-defined problem because there is only one standard response that solves this problem.

Use no more than 4 lines to connect all nine dots, and do not lift your pencil from the paper once you begin.

2. Define ethics and apply to solving practical problems. (Competencies PS/C-3, PS/C-4)

   a. List as many terms or phrases that use the word ethics (i.e. medical ethics, code of ethics, ethical behavior). View the video: Business Ethics in the 21st Century. The video is available from Resources@MCCE, item #BE video 10.

   Questions for Discussion/Formative Assessment
   
   - What do these terms have in common?
   - How would someone’s values (beliefs) affect their ethical actions? (e.g., it’s not wrong unless you get caught, or someone who makes an anonymous donation to a charity)

   b. Break into small groups and have each group develop a definition of ethics using a poster board for their thoughts. Each group can write, draw or decorate. The only requirement is that the poster must include a definition for ethics somewhere on it. Present the poster to the rest of the class.

   c. Consider this problem:

      Nick and Darren are good friends. They sometimes study together or play basketball at each other’s house. Nick is supposed to be home by 10:00 p.m. on school nights. On Thursday night, Nick went out with some friends and did not get home until 11:30 p.m. He told his parents he was studying at Darren’s house and lost track of time while working on a project. The next day Nick told Darren that if his parents should call to ask, Darren should say that Nick was at his house. Darren doesn’t want to lie. He also doesn’t want his friend to get into trouble. What do you think Darren should say if Nick’s parents call?

   Questions for Discussion/Formative Assessment
   
   - Are there any ethics being challenged here? If so, which ones? (Honesty, accountability, fairness, loyalty, integrity, pursuit of excellence, respect for others, promise keeping and responsible citizenship)
   - Which boy is compromising ethics? Why?
   - Which ethics would be less important than others in this problem?
3. Develop solutions for practical problems which demonstrate concern for self and others. (Competencies PS/C-1, PS/C-4)
   a. Use the Ethical Decisions vs. Core Values Fact Sheet to discuss how core beliefs can create an ethical dilemma in real life. For example, it is important to be loyal to a friend. Normally it is not difficult to be a loyal friend. What kinds of situations can come up that might cause a friend to not be loyal?
   b. Keep a journal for three days describing any practical problems that you faced during this time. Write by each item the method used to solve the problem.
   c. Work as a class on Instructional Strategy 2 (c) to complete Activity Sheet #1: SEARCH for Solutions. Remember to use your own values and core beliefs in a caring and respectful manner.

Teacher Note: To ensure students’ understanding, have them list the methods people may use to make important decisions. Some examples may include:

- **Avoidance**-ignoring a problem and hoping it will go away.
- **Experience**-what turned out well before should do the same again.
- **Habit**-Making the same decision under the same circumstances without considering if it is the best decision.
- **Denial**-pretending there is no problem.
- **Impulse**-acting on the first idea that comes to mind.
- **Analysis paralysis**-to research, ponder and agonize until it’s too late to matter.
- **Cinderella Syndrome**-believing the Fairy Godmother will magically solve the problem if you wait and wish.
- **Delegation**-to let someone else solve the problem.
- **Rational review (practical problem-solving)**-to consider all alternatives, consequences and effects on oneself and others before making a decision.

   d. Use Instructional Strategy 2(c) as a discussion starter. In small groups, use Activity Sheet #1: SEARCH for Solutions to identify and propose a solution to other types of ethical dilemmas teens face. Each group presents its ethical dilemma and steps to solve this problem.
Summative Assessments
(Teachers may insert their own assessments)

Paper and Pencil

Classroom Experiences

Application to Real-Life Settings
Fact Sheet #1

Ethical Decisions vs. Core Beliefs

Although individuals value wants and needs differently, core beliefs are shared by everyone in a group or community. Ethical decisions that place you in a difficult position typically challenge one or more of the following ten core beliefs:

1. Caring - treating people with concern and respect
2. Honesty - being truthful and not deceiving or distorting information
3. Accountability - accepting responsibility for decisions and consequences for actions
4. Fairness - being open-minded and unbiased
5. Loyalty - being faithful and honest in dealings with others
6. Integrity - using independent judgment and avoiding conflicts of interest
7. Pursuit of Excellence - striving to achieve potential
8. Respect for Others - recognizing the rights of others to privacy; includes being courteous, prompt and decent
9. Promise Keeping - being reliable and following through to maintain expectations of performance
10. Responsible Citizenship - actions should be in accordance with society’s values
# SEARCH for Solutions to Solve Problems

**Process Module 3**

## Competencies PS/C-1, C-3 and C-4

### Activity Sheet #1

| **S**tate the Practical Problem | A practical problem often is:
- Poorly structured (it is not a neat, clean, clear problem)
- Involves conflicting values
- Involves taking action that will affect others
- Lacks vital information on first encounter
- Subject to change with elaboration
- Gray or may have no “right” answer |
|---------------------------------| What is the problem?
What are the various aspects of the problem that make the solution difficult to determine?
Who is involved in the problem?
Who is affected by any solution?
What is likely to happen if I do nothing?
What do I want the outcome to be? |
| **E**xamine the facts, values & people involved | This can be considered the research phase where all facts are determined and the need for additional information is itemized. Individuals will differ on their responses at this step. Understanding the role values play in decision making is important at this point. |
|---------------------------------| What facts do I need?
Where is the information available?
Who can I turn to for guidance?
What values are in conflict? |
| **A**nalize the options | This is like standing at a crossroads with several paths to be considered. Long-term and short-term consequences are important, as well as the impact on self and others. Determine the trade-off for each option. |
|---------------------------------| What are my options?
What are short-term results for each?
What are the long-term consequences for each action?
How will each outcome affect me?
How will each outcome affect others I care about? |
| **R**eview the options & select the best choice | The steps above are thinking steps. This is the first action step. Every option is an action—even doing nothing has a consequence and is a possible response. This is the stage where every option is placed on a balance with its likely consequences. |
|---------------------------------| Which option best reflects my values and solves the problem?
Which option(s) am I unable to live with?
Which option do I choose?
What skills do I need for the action? |
| **C**hart & start an action plan | With all of the facts stated, rated and weighted, all that remains is to take action. A solution must be planned and implemented. You've decided what you are going to do and how you will do it. |
|---------------------------------| What resources do I have?
What resources do I need?
What barriers might prevent me from taking this action?
How do I organize my actions? |
| **H**ighlight the outcome | The evaluation process is critical in determining if you did the right thing after all. It also helps to review what you learned from the experience and how this knowledge can be applied to similar problems in the future. |
|---------------------------------| Did this choice solve the problem?
Did this choice create additional problems?
Would you apply this choice again?
What did you learn from this? |
The SEARCH for Solutions takes you step-by-step through the problem-solving process. Complete the steps below as you solve practical problems. You may go through the steps in a different order, but it is important to complete every step.

State the problem to be solved.

Examine information needed to solve the problem.

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<th>GOALS &amp; VALUES:</th>
<th>FACTS:</th>
<th>CONSIDERATIONS:</th>
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Analyze options or alternatives.

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<th>POSSIBLE SOLUTIONS:</th>
<th>POSSIBLE CONSEQUENCES:</th>
<th>EXPECTED OUTCOME:</th>
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Review the options and select the best choice. Place a check beside your solution listed above. Provide logical reasons for your choice.

Defend your solutions:
- Relevance to the problem
- Ethical base (positive long-term effects on all involved)
- Ability to resolve the problem
- Strength based on facts

Chart and start a plan for action. Identify the actions you need to take, when they will be done, and who will do them.

Highlight the outcome of your actions. Evaluate whether or not your choice was best. Identify what you have learned from solving this problem. Did you discover another solution you could have tried?
Developing and Using Habits of Mind to Solve Practical Problems

A habit is a learned and practiced behavior. You do many things by habit without consciously thinking about it. The 16 habits of mind listed below will help you solve everyday, practical problems. You may use each habit for a different problem, or at a different time.

Review the list below and circle the number of the habits you already use a lot. Give an example of how you have used this habit to solve a problem.

1. Persisting

2. Managing impulsivity

3. Listening with understanding and empathy

4. Thinking flexibly

5. Thinking about thinking (metacognition)

6. Striving for accuracy

7. Questioning and posing problems
Competencies PS/C-1, C-3
Activity Sheet #2 continued

8. Applying past knowledge to new situations

9. Thinking and communicating with clarity and precision

10. Gathering data through all senses

11. Creating, imagining, innovating

12. Responding with wonderment and awe

13. Taking responsible risks

14. Finding humor

15. Thinking interdependently

16. Remaining open to continuous learning

After Thinking It Over, I say…
Is this an example of a Well-defined Problem or an Ill-defined Problem. Why?

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

The Facts Say…

The Nine Dot Problem

Without lifting your pencil from the paper, connect all nine dots using no more than four lines.

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• • •
• • •
UNIT 4
TAKING ON A LEADERSHIP ROLE

Practical Problem:
How do I develop the knowledge and skills necessary to take on leadership roles?

Missouri Family and Consumer Sciences Competencies:
(PS/D-1) Define the roles of a responsible family member and citizen.
(PS/D-2) Demonstrate positive leadership skills.
(PS/D-3) Compare and contrast the duties of a responsible family member and citizen.

Enabling Objectives for Competency Mastery:
1. Describe the meaning of accountability for one’s decisions and actions.
2. Determine the characteristics of a leader.
3. Apply the meaning of responsibility to family and community.

Teacher Background Information

Rationale
Leadership is a group process in which everyone has something to contribute. Leaders set examples and influence others. Leaders identify problems and take charge using problem-solving techniques. At times leaders must spend some of their time being a follower. Leadership will often change as the situation changes. Leadership is no longer one person in charge. The concept of Transformation Leadership has replaced the single charismatic leader.

Terry says that leadership is taking “responsibility for ourselves in concert with others . . . [creating] a global commonwealth [a self-governing group] worthy of the best that we human beings have to offer” (1993, p. 275). Drath and Palus (1994) describe leadership as a shared human process: leadership is meaning-making in a community of practice, i.e., “a group of people with a shared history of doing something, usually work, together” (p. 4). “Leadership is intimately connected to processes of group . . . and even species-wide integration and togetherness and ultimately to communal survival, growth, and enhancement” (p. 13). Thus, leaders do leadership.

Individuals are not born with leadership characteristics, but are shaped and inspired by their surroundings. Students need to identify positive leadership characteristics in order to improve their personal leadership skills.

Background
“Leadership is action, not position.” Donald H. McGannon

Leadership is responsibility, action and contribution to your school and community.
Leadership occurs in many different ways. There are different kinds of leadership. They are:

* Leadership of the moment
* Leadership by example
* Community leadership
* Job leadership
* Trail-blazing leadership

Leaders of the moment are people who take charge. Leadership may be based on the persons knowledge of the current event and/or skills needed to manage the event.

Leadership by example is being a role model for others. You become a leader through everyday actions and decisions.

Community leadership requires you to be involved in community activities. A leader in the community has a clear picture of what needs to be done and the steps necessary to carry out the task. Communication skills are important in community involvement. A leader needs to be clearly understood and have skills in public speaking.

Employers today look for potential employees who have organizational, effective communication, self-discipline, and problem-solving skills. Leadership qualities lead to advancement in career choices.

Trail-blazing leadership occurs when a person takes the initiative to invent a new product or become an entrepreneur. This type of leadership is important to the advancement in technology and the economy.

Leaders motivate the team to get the job done and keep the team members working together. Maintaining good communication between team members builds mutual respect.

Refer to *Qualities of a Good Leader* Fact Sheet for more information.

References:


Family, Career and Community Leaders of America, Inc. *FCCLA Programs for Individual Action and Recognition; Dynamic Leadership and Power of one; CD-Rom, FCCLA, Inc., Reston, VA: 2005*
Websites:
Family, Career and Community Leaders of America, Inc. http://www.fcclainc.org
Missouri Association of Family, Career and Community Leaders of America.
http://www.dese.mo.gov/divcareered/fccla.htm
Taking On a Leadership Role

Instructional Strategies

1. Describe the meaning of accountability for one’s decisions and actions. (Competencies PS/D-1, PS/D-2)

   a. Make a timeline of the most important choices you will face during your lifetime. Show the ages at which you think you’ll be making those choices. Illustrate your timeline.

   ```
   Questions for Discussion/Formative Assessment
   - Which decisions have the greatest affect on your future?
   - What does it mean to be personally responsible?
   - Can a person demonstrate good leadership skills if they do not hold themselves accountable for daily decisions and actions?
   ```

   b. Use Activity Sheet #1: Check Your Listening Skills to focus on specific listening skills. Listening is an important part of leadership. This activity will highlight some skills you may wish to improve.

   Teacher Note: The activity below uses an instructional strategy called Listening Teams. You may wish to have students do this activity after you have presented information in class about leadership concepts and skills. Use the background information at the beginning of this unit, or materials from FCCLA’s Dynamic Leadership program to explore leadership concepts and skills with students.

<table>
<thead>
<tr>
<th>Team</th>
<th>Role</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>1</td>
<td>Questioners</td>
<td>Ask at least two questions about the material presented.</td>
</tr>
<tr>
<td>2</td>
<td>Agreers</td>
<td>Tell which points they agreed with, or found helpful, and explain why.</td>
</tr>
<tr>
<td>3</td>
<td>Nay-sayers</td>
<td>Comment on which point(s) they disagreed with or found less helpful, and explain why.</td>
</tr>
<tr>
<td>4</td>
<td>Example Givers</td>
<td>Provide specific examples or uses for the information presented in the lecture or lesson.</td>
</tr>
</tbody>
</table>

   c. Divide students into four Listening Teams with specific assignments described above. Use the background information at the beginning of this unit, or materials from FCCLA’s Dynamic Leadership program, to explain leadership concepts and skills. Listening Teams will complete their assignment following the lecture.

   d. Complete Activity Sheet #2: Taking Responsibility for Actions to explore the behaviors of a person who accepts responsibility for their actions and decisions.

2. Determine the characteristics of a leader. (Competencies PS/D-1, PS/D-3)

   a. Complete Activity Sheet #3: My Leadership Profile. On the chalkboard, list the three leadership styles identified on the handout and list the consequences of using each leadership style. Decide which leadership style would work best when working in groups in this class.
b. Draw a continuum on the board or on an overhead transparency. Write the word “Success” on the right side of the continuum. Brainstorm ideas for the opposite of success. Many will say “failure.” Following the discussion questions below, ask students to complete Activity Sheet #4: **Thinking It Over** on the meaning of success.

### Questions for Discussion/Formative Assessment
- What values are reflected in each leadership style?
- Which leadership style is best for your school organizations? Your family? Your community? Why?
- What would happen if a leader did not act in the best interests of a group?
- How can you, as a leader, know if you are acting in the best interests of a group?

Teacher Note: Failure is often thought of as the opposite of Success. However, Not Trying is really the opposite. Failure is some point on the continuum from Not Trying to Succeeding. Failure is part of learning and can lead to Success. Not Trying is the lowest point on the continuum and can never lead to Success.

### Questions for Discussion/Formative Assessment
- Why might you think Failure is the opposite of Success? Is it really?
- How else can we think of failure?
- What is really the opposite of Success? Why?
- Is it okay to fail some times?
- What can we learn from Failing?
- What can we learn from Success?

c. Complete Activity Sheet #5: **Getting Along With Others** to explore the characteristics of good leaders in working with the diverse members in groups.

3. **Apply the meaning of responsibility to family and community.** (Competencies PS/D-2, PS/D-3)
   
a. Invite a guest speaker from the community to talk about the importance and value of community involvement. Speakers might come from industry or service organizations.

b. Complete a T-Chart describing your responsibilities as a family member. Post the charts around the room for students to read each other ideas. Tally how many students list the same items.
Teacher Note: An example of a T-Chart for family responsibilities might look like this:

<table>
<thead>
<tr>
<th>Looks Like</th>
<th>Feels Like</th>
<th>Sounds Like</th>
</tr>
</thead>
</table>

c. Plan and organize a “Parent’s Morning Out” where parents can bring their children for a few hours or a teacher appreciation event. Identify committees to plan each of the parts of this event. One group might plan fun activities, another group could coordinate publicity, etc.

**Summative Assessments**

**Paper and Pencil**
1. Create a checklist for identifying leadership qualities at home, at school, at work, and in the community. Draw a Venn diagram to show which qualities overlap the various roles and which qualities are unique to one role. (Competencies PS/D-1, PS/D-3)

2. Write a biography about you and the goals you have achieved so far in life. Describe your leadership philosophy and outline your strengths and weaknesses as a leader. Explain the qualities you look for from leaders around you. (Competencies PS/D-1, PS/D-3)

3. Based on the information you gathered in Instructional Strategy 3(b), write a one-page explanation of why those characteristics describe responsibilities in your family. (Competencies PS/D-1, PS/D-3)

**Classroom Experiences**
1. As a class, plan and conduct an FCCLA meeting for your chapter. Develop an agenda which includes a program and time for chapter business. During the meeting, use Robert’s Rules of Order. (Competencies PS/D-2)

2. Identify one leadership goal you want to realize this semester. Use the FCCLA planning process to identify the goal, create a plan of action, and implement the plan. Come back to this plan at the end of the semester and evaluate your progress. (Competencies PS/D-2)

**Application to Real Life**
1. Volunteer in your school or community. Identify an organization or event that you want to participate with. Make a plan for who, how, when, what, etc. you will do to contribute to this organization. You may choose the American Heart Association’s Heart Walk, a Saturday at the local food bank, or delivering meals to residents in your community, etc. (Competencies PS/D-2, PS/D-3)

2. Use Activity Sheet #6: *Cooperative Team Self -- Assessment* to evaluate Instructional Strategy 3(c). (Competencies PS/D-1, PS/D-3)
Qualities of a Good Leader

1. Leaders give service and time to the group. They take pride in being a part of community service programs.

2. Leaders build leadership skills in others by giving recognition to other members. Giving credit where credit is due.

3. Leaders listen to the ideas, problems, and concerns of others. A leader can accept positive and negative criticism. Good interpersonal skills are essential for leadership.

4. To be a leader, you must first be a manager. Leaders organize activities, projects, and tasks of the group. They are problem-solvers and direct decision-making within the group.

5. Leaders inspire others to participate and achieve. Leaders encourage other members to strive for excellence.

6. A good leader should be an active learner. They are constantly striving for self-improvement and new knowledge. The best leaders are strategic thinkers.

7. Leaders are optimistic, enthusiastic and cheerful. All good leaders have clear long-term visions.

8. Leaders have integrity. They set good examples and inspire others. True leadership is indirect in the sense that others want to follow you instinctively.

9. Leaders are dependable, reliable, and have perseverance. People respect them for being punctual and honoring their commitments. Leaders take responsibility for their actions and decisions.

10. Leaders remove themselves from their comfort zone and take reasonable risks.

11. Leaders have a high self-concept and treat themselves with respect. They take care of their physical, mental and social needs.
Check Your Listening Skills

Directions: Check your listening skills by answering the following questions.

Do you:

____ 1. Want to remember what is being said?
____ 2. Have an interest in the opinions of others?
____ 3. Give the speaker your full attention?
____ 4. Face the speaker?
____ 5. Show facial expressions as feedback?
____ 6. Maintain good eye contact?
____ 7. Keep an open mind?
____ 8. Allow the speaker to finish without interrupting?
____ 9. Listen for main ideas: “My main point is...?”
____ 10. Recognize key phrases: “My main criticism is...?”
____ 11. Make an attempt to shut out other noises and distractions?
____ 12. Try to concentrate on what is being said?
____ 13. Anticipate what the speaker is going to say?
____ 14. Mentally summarize what the speaker has said?

If you answered “no” to more than five items above, you need to improve your listening skills. Keep a journal for one week and record the progress you have made. Note your improvements or regressions.
**Taking Responsibility for Actions**

Directions: Read over the list below describing common reasons some students do not get their work done in school. Place a check mark in the box that best describes how you feel about each reason. Circle the number of each reason that you believe shows a lack of personal responsibility for actions.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Good reason</th>
<th>Ok, if it doesn’t happen too often</th>
<th>Poor reason</th>
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<tbody>
<tr>
<td>1. I don’t like school.</td>
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<td>2. I don’t like some classes.</td>
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<td>3. I was thinking about something else.</td>
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<td>4. I didn’t get enough sleep the night before.</td>
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<td>5. I don’t like some teachers.</td>
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<td>6. I don’t want to do homework.</td>
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<td>7. I just don’t care.</td>
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<td>8. I thought I understood.</td>
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<td>9. I am bored with school.</td>
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<td>10. I had more important things to do.</td>
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<td>11. I didn’t understand the directions.</td>
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<td>12. I was “daydreaming”.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I would rather have been somewhere else.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I was sick.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I can’t stand to be in school all day.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I can’t get organized to do assignments.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I can’t get interested.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. It was too noisy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. A student next to me interrupted.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I had trouble remembering all the steps.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. I let it go too long.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I didn’t have a paper or pencil.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Teachers don’t like me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I was doing another assignment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. I think most other kids are smarter.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. I was talking to another student.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Various leadership styles are needed for different circumstances. Determine your leadership style and compare it to the needs of the group you are leading. Place a checkmark beside those items that describe you as a leader.

1. I work best as a leader when I make the decisions, then supervise group members as they do their jobs.
2. I like to involve other people in making decisions and deciding what the group will do.
3. I like to inspire others to make their own contribution and work independently toward the group goal.
4. I like to feel like I am in control of a group.
5. I like to cooperate with others to work toward a group goal.
6. I like to influence others to make whatever contribution they can.
7. I believe a leader should oversee others to get a job done.
8. I try to organize others, allowing them to work cooperatively.
9. I prefer to delegate the work of a group, so that each member may work independently.
10. When a conflict occurs, I prefer to select a solution that is best for all members.
11. When a conflict occurs, I prefer to negotiate a solution best for all.
12. When a conflict occurs, I prefer to influence the group, but allow each member to make their own choice.

Based on your responses to these questions, use the information below to determine your leadership style.

**Leadership Styles**

**Director Style:** The director controls and directs the group, supervising all actions and overseeing the activities of members. The result of this leadership style is group members who are largely dependent on their leader to organize the action of the group. Responses 1, 4, 7 and 10 represent this style.

**Democratic Style:** The democratic leader involves group members and encourages cooperation so that members work interdependently. Negotiation differences and organizing the group so that each member makes an important contribution. Responses 2, 5, 8, and 11 represent this style.

**Delegator Style:** A delegator inspires and influences other group members, empowering them to take action. This type of leader, however, delegates the authority to the point that members act independently of other members. Responses 3, 6, 9 and 12 represent this style.
Taking On a Leadership Role

Competencies PS/D-1, D-3

Name ________________________

Activity Sheet #4

Thinking It Over

The Facts Say…

Failure means…
Success means…

Failure means to me…
Success means to me…

After Thinking It Over, I say…
Getting Along With Others

Directions: The following questions are related to characteristics that help us to get along with others. Mark the answer that best describes your own actions. Be honest with yourself.

YES  NO

1. Can you be depended upon to do what you say you will?  
2. Do you go out of your way cheerfully to help others?  
3. Do you avoid exaggeration in your statements?  
4. Do you avoid being sarcastic?  
5. Do you refrain from showing off how much you know?  
6. Do you feel at ease with your associates?  
7. Do you avoid making fun of others behind their backs?  
8. Do you keep from domineering others?  
9. Do you avoid laughing at the mistakes of others?  
10. Do you avoid finding fault with everyday things?  
11. Are you helpful when others make a mistake?  
12. Do you keep out of arguments?  
13. Do you smile often?  
14. Do you have patience with new ideas?  
15. Do you avoid gossiping?  
16. Do you have a sense of humor?  
17. Do you avoid emotional outbursts?  
18. Are you careful not to say things that might offend others?  
19. Do you avoid trying to reform others?  
20. Are you usually cheerful?  
21. Do you look upon others without suspicion?  
22. Do you refrain from telling people their moral duty?  
23. Which characteristic is your “strong point” in getting along with others?  
   Cooperation   Friendliness/Loyalty   Honesty
   Respect       Dependability          Self control
24. Which characteristic needs the most improvement?  
   Cooperation   Friendliness/Loyalty   Honesty
   Respect       Dependability          Self control
25. What could you do to help improve the characteristic marked above?
Cooperative Team Self-Assessment Form

Team Members: ____________________________________________________________

Project: ________________________________________________________________

Goal: ________________________________________________________________

Evaluate the efforts of the team in each of the areas below.

1. Participation of all team members
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

2. Efforts to achieve goal
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

3. Positive listening skills used in the project
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

4. Respect communications used among team members.
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

5. Clear communication among leader and members
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

6. Effective conflict resolution skills used when needed
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

7. Management of time and other resources
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

8. Met project goal
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

9. What are your strengths as a team?
   - Excellent
   - Very Good
   - Needs Improvement
   - Weak

10. What actions could you take in the future to improve your teamwork skills?

Adapted from Parenting Resources Guide, Ohio Vocational Materials, Columbus, Ohio, 1995.
UNIT 1
DETERMINE INFLUENCES ON PERSONAL FOOD CHOICES

Practical Problem:
How does my heritage, community, family, and personality influence my food choices and eating habits?

Missouri Family and Consumer Sciences Competencies:
(A-1) Examine cultural influences (ethnic, religious)
(A-2) Explore family and social influences
(A-3) Examine psychological influences
(A-4) Investigate environmental influences (economic, political, geographic, media)
(A-5) Research technological influences

Enabling Objectives for Competency Mastery:
1. Describe the various influences on your food choices.
2. Identify types of cultural influences.
3. Compare the physical food needs with psychological food needs.
4. Explain various environmental influences that affect your food choices.
5. Explore how technology influences what foods options are available.

Teacher Background Information

Rationale
Food choices and eating habits are influenced by factors other than hunger. Hunger is the body’s way of signaling it is time to eat, not what to eat. Many people eat when they are not actually hungry. Students should understand the variety of factors that influence food choices so that they are prepared to make good decisions and develop good eating habits to maintain health.

Background
Not only is food necessary for life, it is one of life’s great pleasures. Food sustains us emotionally and physically. We often talk of ‘comfort’ foods, and most of the special events in our lives are celebrated with food as a centerpiece. For example, birthdays, holidays, or events such as weddings, sports, and graduations all include food as part of the celebration. These are all related to the psychological comfort that food provides rather than the physical need for energy.

People eat food to satisfy many needs. They eat to satisfy their physical needs when they are hungry. They sometimes eat to satisfy their psychological needs when they are stressed, bored, anxious, frustrated, happy, frightened, or wanting to enjoy companionship over a meal. Food provides a sense of security, a feeling of belonging,
Determine Influences on Personal Food Choices

and psychological pleasure or enjoyment. Appetite is the *psychological desire* to eat; hunger is the *physical need* to eat.

Culture includes the shared customs, traditions, and beliefs of a group of people. This culture is part of what makes the group unique and helps to define its identity. Culture can be defined by geography, heritage or ethnic origin, or religion. Food customs are found in virtually every culture. In some cases the food customs are influenced by the climate or geography.

Family, friends, and the community also influence an individual’s food choices. Families often develop rituals or customs. For one family, birthdays may be celebrated by cake and ice cream parties with family members only. Another family celebrates birthdays by allowing the “birthday person” to select the foods for the dinner menu. Another family tradition might include eating brunch out every Sunday.

Some communities have food customs such as chili suppers, pancake breakfasts, founder’s day celebrations, or festivals to feature a food harvested locally. Friends also influence food choices. Since we spend a great deal of time in social groups, friends influence when, where and what we eat.

Technology and the media also influence food decisions. Advertising, television cooking shows, and in-store marketing using product samples are all ways the media influences our decision-making process regarding food choices. Food additives that prolong shelf-life, enhance flavor, or improve nutritional value are all ways that technology can influence our food choices.

References:


Instructional Strategies

1. Describe the various influences on your food choices. (Competencies A-1, A-5)
   a. Ask students as a class to create a list of all their favorite foods. Name anything from hot dogs to macaroni and cheese to lasagna to tacos. Go over the list and discuss what factors might influence the food listed. For example, what factors might influence someone to like tacos? What factors might influence someone to choose beef stew as their favorite food.
b. Bring a variety of foods to class that may be less familiar to students (e.g., artichokes, starfruit, plantains, macadamia nuts, or an unfamiliar type of fish). Identify the foods and describe where in the world the food originates. Explain why you are not as familiar with this food item. Is it because the food is not from your geographic area, not a part of your ethnic background, or some other reason?

c. Identify three traditions in your family that involve food. What is the tradition? How is food related to this tradition? Are only certain foods included in this tradition? How would the family tradition be different if some of the foods were no longer available?

d. Use Activity Sheet #1: Thinking It Over to reflect on the factors that influence food choices.

2. Identify types of cultural influences. (Competency A-1)

a. Use Activity Sheet #2: Understanding Culture to define culture and list the characteristics that describe or differentiate one culture from another.

b. Define heritage. Use a Mind Map graphic organizer to create a list of cultural or ethnic groups.

c. Name some countries or regions of the world and identify some of the foods that relate to those areas (e.g., Latin America, Africa, the Middle East, France, England, Italy, the Mediterranean, Germany, Scandinavia, Southeast Asia, Asia, Australia, India, and Canada).

d. Name regions of the United States and identify particular foods that come to mind (e.g., New England, the South, the Midwest, the Southwest, the Pacific Coast, the Northwest, and the Hawaiian Islands).

e. Select a modern religion and research food traditions related to this religion. Some traditions include serving specific foods, other traditions involve fasting. Make a short presentation to the class on your findings.

Questions for Discussion/Formative Assessment

- Why did you select that food as your favorite? Does your grandmother always prepare that dish when you visit, or do you always have this food as part of a favorite family tradition?
- When, or how often, do you eat that food? Does it remind you of someone special or a special time?
- What memory does this food trigger when you think of it?

- What food traditions are a part of this religion?
- Are there any foods that are forbidden or restricted? Why?
- How does fasting affect health and wellness?
- How might a person’s health be affected by observing this religious practice?
3. Compare the physical food needs with psychological food needs. (Competencies A-2, A-3)
   
   a. Invite a guest speaker to class from the local food bank, Meals on Wheels, or similar community organization that provides food for those in need. Discuss the physical needs of those with poor nutrition or those who are hungry. Describe the psychological feelings of security related to food.
   
   b. Divide into groups of five and using Activity Sheet #3: My Favorite Foods, have each group member write one of his or her favorite foods in the appropriate section. Groups should discuss their food choices.

   Questions for Discussion/Formative Assessment
   
   - Why do you think you choose the foods you wrote on the list? (e.g., habit, familiar, family favorite, taste, easily available)
   - Did you select your favorite foods based on the foods your body needs for health, or on your taste preferences?
   - Which is better, foods that are healthful or foods that taste good?
   - Are there some healthful foods that also taste good?
   - Could you eat foods that you don't care for and still be healthy?
   - How do you make decisions about which foods to eat? Do you choose only foods that are healthful or only foods that taste good?
   - Do you ever eat what you don't like because you know that the food is good for you?

   c. Define 'comfort foods.' Describe times when you want the comfort of familiar foods.

   Questions for Discussion/Formative Assessment
   
   - Were you trying to satisfy your body's need for food, or your psychological needs for security, acceptance, or pleasure?
   - What happens if your psychological needs become too great and you rely on food to satisfy these needs?
   - How can you determine if your psychological desire for food is healthy or unhealthy?
   - Who can help someone who has unhealthy psychological desire for food?

4. Explain various environmental influences that affect your food choices. (Competency A-4)
   
   a. Suggest reasons why there are no coconut trees or banana trees in Missouri. Would one expect to find fresh lobster in Missouri? Why or Why not? Make a list of other foods that are not native to Missouri. Next, make a list of foods that are native to Missouri, but are not readily available year around. What environmental influences affect the availability of these foods?
b. Create a classroom display or bulletin board from magazine or newspaper clippings to demonstrate the role of the media in food choices. The bulletin board could feature only food advertising to illustrate the types and amount of advertising that reach consumers, or it could focus on food topics in the news.

5. **Discover how technology influences what foods options are available.**  
   (Competency A-5)

   a. The mission of the International Food Information Council (IFIC) is to communicate science-based information on food safety and nutrition. IFIC is supported primarily by the broad-based food, beverage and agricultural industries. This website provides an extensive list of agencies with various responsibilities for ensuring food quality and safety especially related to new technology. Work individually or in pairs to view this website and provide a brief report to the class on one agency or organization listed and its role in one of the following four functions: Establishment of Safety Standards, Monitoring and Inspection, Enforcement, or Tracking Food Safety Problems.  
   http://www.ific.org/food/safety/index.cfm

   b. Divide students into groups to complete the *WebQuest on Genetically Engineered Foods*. Details on organizing a WebQuest are included in this unit along with detailed instructions for completing this activity.

---

**Summative Assessments**

**Paper and Pencil**

1. Divide the class into teams or ‘regions.’ Draw or use a prepared map of the United States with the boundaries of each state drawn in. Each team is to research its region’s food customs. The team is to fill in the states in its region with information about food customs pertinent to its region. Teams may use photos cut from magazines, original drawings, or other methods to illustrate the geographic, ethnic, and religious influences. (Competency A-1)

2. Interview at least two different adults and ask what food traditions they remember from their childhood. Ask why these traditions are memorable, and whether the traditions were influenced by geography, ethnic origins, or religious practices. Write a one-page summary comparing their responses. Use the *Writing Assignment Scoring Guide* in this unit to assess the paper. How are the food traditions similar between these two people? How are the food traditions different? (Competency A-2)

**Classroom Experiences**

1. Use the *WebQuest Scoring Guide* in this unit to assess the WebQuest activity related to the influences of technology on food choices. (Competency A-5)

**Application to Real Life**

1. Plan and host a cultural food fair. Divide into teams to research and select one menu from one of the ethnic groups identified in Instructional Strategy #2. Prepare one dish from the menu to allow the class to sample foods from this ethnic group. Provide a display or poster with other information about this ethnic
group. What factors influence the foods that are represented by this group? (Competency A-1)
Determine Influences on Personal Food Choices

Competencies A-1, A-5

Activity Sheet #1

Name ___________________________

It Over

Thinking

The Facts Say… Food choices are influenced by:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

After Thinking It Over, I say…

The most important influence on my food choices is:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Understanding Culture

Use the Chart below to help you describe the word “culture.” By identifying what culture is and is not, you will learn more about yourself and your community.

<table>
<thead>
<tr>
<th>Essential Characteristics</th>
<th>Non-Essential Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
<td>Non-Examples</td>
</tr>
<tr>
<td></td>
<td>&quot;Culture&quot;</td>
</tr>
</tbody>
</table>

Name ___________________________
Determine Influences on Personal Food Choices

Competencies A-2, A-3
Activity Sheet #3

<table>
<thead>
<tr>
<th>Group __________________</th>
<th>Date _______________</th>
<th>Period ________________</th>
</tr>
</thead>
</table>

**My Favorite Foods**

Divide the class into groups of five students. Pass this sheet around the group and each person write in one of his/her favorite foods for each food group.

<table>
<thead>
<tr>
<th>Bread, Cereal, Rice and Pasta</th>
<th>Milk, Yogurt, Cheese</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________________</td>
<td>______________________</td>
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<td>____________________________</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>__________</td>
<td>______</td>
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<tr>
<td>__________</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Meat, Poultry, Fish, Dry Beans, Eggs and Nuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________________</td>
</tr>
<tr>
<td>____________________</td>
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</tbody>
</table>

68
In this unit we introduce using technology in the classroom with a WebQuest activity. A WebQuest allows students to explore the web for information and it is an excellent way to integrate the Internet into the classroom. WebQuests were developed by Dr Bernie Dodge in 1995.

**Short Term WebQuests**

The instructional goal of a short term WebQuest is knowledge acquisition and integration, described as Dimension 2 in Marzano’s (1992) *Dimensions of Thinking* model. At the end of a short term WebQuest, a learner will have reviewed a significant amount of new information and made sense of it. A short-term WebQuest is designed to be completed in one to three class periods.

**Critical Attributes**

WebQuests of either short or long duration are deliberately designed to make the best use of a learner’s time. There is little educational benefit for students to surf the Internet without a clear task in mind, and most schools must limit student connect time. To achieve that efficiency and clarity of purpose, WebQuests should contain at least the following parts:

1. An introduction that sets the stage and provides some background information.
2. A task that is doable and interesting.
3. A set of information sources needed to complete the task. Many (though not necessarily all) of the resources are embedded in the WebQuest document itself as anchors pointing to information on the World Wide Web. Information sources might include web documents, experts available via e-mail or real-time conferencing, searchable databases on the net, and books and other documents physically available in the learner’s setting. Because pointers to resources are included, the learner is not left to wander through web space completely adrift.
4. A description of the process the learners should go through in accomplishing the task. The process should be broken out into clearly described steps.
5. Some guidance on how to organize the information acquired. This can take the form of guiding questions, or directions to complete organizational frameworks such as timelines, concept maps, or cause-and-effect diagrams (examples of each type of graphic organizer is included in Section 4 of the Implementation Handbook for Family and Consumer Sciences) available online at: [http://dese.mo.gov/divcareered/facs_curriculum.htm#Implementation_Handbook_for_FCS](http://dese.mo.gov/divcareered/facs_curriculum.htm#Implementation_Handbook_for_FCS)
6. A conclusion that brings closure to the quest, reminds the learners about what they've learned, and perhaps encourages them to extend the experience into other domains.

7. An evaluation or assessment of student growth.
Technology and Genetically Engineered Foods

Introduction
Imagine this...an orange that contains all the nutrients in a multivitamin, a tomato with more flavor as well as cancer fighting substances; sweeter strawberries; a potato that produces healthier french fries; allergen-free peanuts; a rice high in beta-carotene; as well as bananas that deliver needed vaccines.

Is this science fiction or real science? It’s real science and it is happening in laboratories today as genetically engineered foods. To many scientists this is a very exciting time to enter a new frontier called food biotechnology.

But now, what about fruits and vegetables that contain a gene from a bacterium that makes these crops more insect resistant? Would you want to eat these foods? What if these crops found their way into our food supply right now? This actually happened in September 2000!

Many people are afraid of this new technology and are calling these new genetically modified foods ‘Frankenstein’ foods. Should we be concerned? Are these foods safe to eat? How would these new crops affect the environment? Are these genetically modified foods everything they promise to be by their proponents? Or are they something to fear according to several advocacy groups? Are you ready for the new foods of the 21st century? Are you ready to explore the risks and benefits of genetically engineered foods? Should we consider food biotechnology a friend or enemy?

What are genetically engineered foods and are they dangerous to our health and to the environment?

The Task
In this WebQuest you will be working together with a team of students in your class. Each team of students will complete assigned tasks that will assist them in answering “The Quest.”

As a member of the group you will explore the topic of “Genetically Engineered Foods” from various resources on the web. You will be reading pages from the web, which may have vocabulary words you do not know. Please feel free to use the on-line Webster dictionary or one in your classroom.
Information Sources

Here is some background information for everyone. Use the Internet information links below to explore the basic questions on the topic:

1) What is food biotechnology?
2) What are genetically engineered foods?
3) What are the potential benefits of genetically engineered foods overall?
4) What are the potential risks of genetically engineered foods overall?

http://ific.org/food/biotechnology/index.cfm
“Background on Food Biotechnology” May 2004

http://www.whybiotech.com/index.asp
The Council for Biotechnology Information communicates science-based information about the benefits and safety of agricultural and food biotechnology. Its members are the leading biotechnology companies and trade associations.

http://ific.org/foodinsight/2004/ma/biotechfi204.cfm
“Updating the Facts on Agricultural Biotechnology” March/April 2004. This is an article from the International Food Information Council Foundation which describes the benefits of food biotechnology and genetically engineered foods.

http://ific.org/publications/other/biotechexperts.cfm
“What the Experts Say About Food Biotechnology” May 26, 2004. Also from the International Food Information Council Foundation, this article features excerpts from national and international non-biased experts.

The Process

1. Each individual from your team will play one of the roles listed below. (Environmentalist, Scientist, Consumer Advocate or Legislator)
2. Read the articles assigned to your role.
3. If you print out the articles, then underline the section of the article that you feel are the most important.
4. If you look at the articles on the computer, then copy the sections you feel are important by copying and pasting it into a word processor.
5. Cite all references by remembering to write down or to copy and paste the URL of the files you used to complete this project.
Environmentalist

You are a world-renowned environmentalist from a major advocacy group. You have been asked to assess the risks and benefits of food biotechnology from an environmentalist point of view for an upcoming conference.

Your main concern is that crops developed from genetic engineering may overcome or destroy the balance of nature. You are also concerned with the need to feed the world’s population while balancing the needs for the environment.

Your task is to collect and analyze information from multiple viewpoints and then formulate a statement to present at the World Food Conference on Food Biotechnology.

Your topic at the conference is:

“Are genetically engineered foods destroying our environment?”

You, as the environmentalist will develop this statement based on informed decision making skills.

Use the Internet information linked below to answer these questions specifically related to Environmentalist:

1) What are the potential benefits of food biotechnology to the environment and to the issue of world hunger?

2) What are the potential risks of food biotechnology to the environment and to the issue of world hunger?

3) Are the benefits worth the risks and why?

Remember:

These web sites provide viewpoints from both sides of this hot issue. Please keep an open mind as you develop your opinion regarding genetically engineered foods and the environment/world food issues.

http://ific.org/foodinsight/2001/ia/iacpbiotechfi401.cfm

“IACP ON TOUR: Exploring the Issues of Food Biotechnology.” August 4, 2003. This article highlights some of the views expressed at discussions conducted by the International Association of Culinary Professionals (IACP) in early 2001.

http://www.foe.org/safefood/geplants.html

“Environmental Hazards of Genetically Engineered Plants.” This article was found on the Friends of the Earth web site. It outlines the possible hazards to the environment.

http://www.whybiotech.com/index.asp?id=1805

“Environmental Benefits: More Studies Show How Biotech Crops Help Wildlife, Environment.” The Council for Biotechnology Information reports that evidence continues to accumulate from around the world about how biotech crops are helping to preserve the environment.
Scientist

You are a world-renowned scientist from a major university. You have been asked to assess the risks and benefits of food biotechnology from a scientist's point of view for an upcoming conference.

Your main belief is that food biotechnology, if used in a responsible way, can solve a multitude of world food issues.

Your task is to collect and analyze information from multiple viewpoints and then formulate a statement to present at the World Food Conference on Food Biotechnology.

Your topic at the conference is:

“Are genetically engineered foods the cure for world food issues?”

You, as the scientist will develop this statement based on informed decision making skills.

Use the Internet information linked below to answer these questions specifically related to Scientist:

1) What are the benefits of genetically engineered foods?
2) What are the risks of genetically engineered foods?
3) Do the benefits outweigh the risks and why?

Remember:

These web sites provide viewpoints from both sides of this hot issue. Please keep an open mind as you develop your opinion regarding genetically engineered foods and science.

http://vm.cfsan.fda.gov/~dms/fdbioeng.html

U. S. Food and Drug Administration, January-February 2000. “Are Bioengineered Foods Safe?” by Larry Thompson. Since 1994, a growing number of foods were developed using biotechnology which have come onto both the domestic and international markets. Are these foods as safe as foods that have been developed using the more conventional approach of hybridization?

http://usinfo.state.gov/journals/ites/0903/ijee/chassy.htm

“The Role of Agricultural Biotechnology and World Food Aid” by Bruce M Chassy, September 2003. This article explains how biotechnology has the potential to play a key role in reducing chronic hunger throughout the world.


“Biotech and Better Health” This is an updated article explaining how plant biotechnology will help people lead healthier lives.
This discusses the technology, safety, and regulation of genetically modified crops and foods. ... concern about genetically modified (GM) foods and the possibility of international trade ... voluntarily label their foods as made with or without the use of bioengineered ingredients ...

**Consumer Advocate**

You are a concerned consumer who wants to know more about genetically engineered foods and how these foods may affect the health of your family. As a concerned citizen you have posted a web page on the Internet to inform other families about genetically modified foods and the potential health issues associated with these foods. You have been asked to assess the risks and benefits of food biotechnology from a consumer’s point of view for an upcoming conference.

Your task is to collect and analyze information from multiple viewpoints and then formulate a statement to present at the World Food Conference on Food Biotechnology.

Your topic at the conference is:

“What the consumer needs to know about genetically engineered foods.”

You, as the consumer advocate, will develop this statement based on informed decision making skills.

Use the Internet information linked below to answer these questions specifically related to Consumer Advocate:

1) What should the consumer know about genetically engineered foods?

2) What are the benefits of genetically engineered foods from the consumer’s perspective?

3) What are the risks of genetically engineered foods from the consumer’s perspective?

4) Do these benefits outweigh the risks and why?

5) Should genetically engineered foods be labeled?

**Remember:**

These web sites provide viewpoints from both sides of this hot issue. Please keep an open mind as you develop your opinion regarding genetically engineered foods and the consumer.

[http://www.cfsan.fda.gov/~lrd/biotechm.html#oga](http://www.cfsan.fda.gov/~lrd/biotechm.html#oga)

Background from the federal Food and Drug Administration with links to other websites related to bioengineering of foods and health.
http://www.whybiotech.com/index.asp?id=consumers

“Consumers See Advantages in Food Developed With Biotechnology,” Two-thirds of consumers would buy biotech food made from crops that required less spraying.

http://www.whybiotech.com/index.asp?id=4005

“Plant Biotechnology Can Play a Key Role in Developing Healthier Functional Foods.” Taste is number one for consumers, but health is becoming more important in food selection.

http://www.cybergrrl.com/fs.jhtml/?/views/hottopic/art5241/


http://www.cspinet.org/nah/6_00/cspinews.html

“Biotech Foods: Friend or Foe?” by Michael F. Jacobson, Executive Director, Center for Science in the Public Interest, June 2000. Genetic engineering is a powerful technology. If used properly, it has great potential.
Legislator

You are a very powerful legislator on the Food and Agriculture Committee in Washington, D.C. Your constituents have asked you to sponsor a bill that would require the labeling of genetically modified foods. You have been asked to describe labeling requirements as outlined in your bill at an upcoming conference.

Your task is to collect and analyze information from multiple viewpoints and then formulate a statement to present at the World Food Conference on Food Biotechnology.

Your topic at the conference is:

“Should genetically engineered food be labeled and why?”

You, as the legislator will develop this statement based on informed decision making skills.

Use the Internet information linked below to answer these questions specifically related to Legislator:

1) Should genetically engineered food be labeled and why?
2) What are the benefits of labeling genetically engineered foods?
3) What are the risks for labeling genetically engineered foods?
4) Is there a need to label genetically engineered foods from the consumer’s point of view?

Remember:

These web sites provide viewpoints from both sides of this hot issue. Please keep an open mind as you develop your opinion regarding genetically engineered foods and labeling requirements.

http://www.whybiotech.com/index.asp?id=3993

“Regulation of Biotech Crops and Food in the United States and Canada” All biotech crops grown in North America must go through years of rigorous testing before they are brought to market.

http://www.whybiotech.com/index.asp?id=farmers

“Biotech Acreage Continues to Increase, Says USDA.” U.S. farmers will likely plant more biotech crops in 2004 than ever before, according to a report released March 31, 2004, by the USDA’s National Agricultural Statistics Service (NASS).

http://research.arc2.ucla.edu/keck/

“FOODS FOR THE FUTURE: Genomics of Bioengineered Foods.” 2003 Symposium sponsored by the W. M. Keck Foundation, offered in cooperation with the Office of Continuing Medical Education, David Geffen School of Medicine at UCLA, and UCLA Extension.

Now, it’s time to debate, discuss, and reach consensus about the issues regarding genetically engineered foods...
Welcome to the World Food Conference on Food Biotechnology

The theme of this year’s conference is:
“What are genetically engineered foods and are they dangerous to our health and to the environment?”

Our conference includes speakers from multiple points of view on this very hot issue. The purpose of this conference is to debate the risks and benefits of genetically modified foods.

The topics to be covered during this conference include:
- Are genetically engineered foods destroying our environment?
- Are genetically engineered foods the cure for world food issues?
- What the consumer needs to know about genetically engineered foods.
- Should genetically engineered food be labeled and why?

Task #1:
Your first task is to meet with other participants of like roles at the World Food Conference and to develop a statement, as a group, to present at this conference.

Group 1 - all environmentalists
Group 2 - all scientists
Group 3 - all consumer advocates
Group 4 - all legislators

This statement will be an opinion supported by facts that is reached by your specific group. It should illustrate the group’s viewpoint concerning genetically engineered foods as it addresses the specific questions outlined for your role. The statement must address the specific topic assigned to your role for this conference. It will include a five to ten minute presentation as well as the written statement.

Your group is also expected to have visuals such as a poster, video, photographs or a PowerPoint slide show etc. as part of your speech at the World Food Conference. All team members of your group are expected to do a part of the five to ten minute presentation. Submit your team’s written statement to your teacher upon the completion of this project.
Task #2:

Your second task at the conference is to regroup with your original team (environmentalist, scientist, consumer, and legislator) and to come to a consensus as to:

1) Whether genetically engineered foods need to be labeled and if so what should be listed on that label?
2) Whether genetically engineered foods are a hazard to the environment and if so, should they only be allowed under strict government regulation? If stricter government regulations are needed, then what should be listed in these regulations?

Remember:

Your team may not leave this conference until a consensus can be reached on the issue outlined above.

Your team, as participants of this conference, will be issuing position papers from the World Food Association on these specific topics:

- “Should there be government regulations requiring genetically engineered foods to be labeled?”
- “Should there be government regulations to protect the environment from genetically engineered crops?”

Each team will write a position paper for each of the two topics as listed above. These position papers must address the questions above and be supported by facts as well as valid reasons for your team’s opinion on these two specific issues. Be prepared to present your position papers at the conference with all your team members participating. Submit your team’s two position papers to your teacher upon the completion of this project.

Conclusion

- So, are genetically engineered foods facts or fiction, friend or foe?
- Would you eat genetically engineered foods now?
- Do you now know where to find them in the grocery store? Should they be labeled?
- Do they harm the environment?
- Are they ‘Frankenstein’ foods or the new foods of the 21st century?

The next time you pick up a piece of fruit or snack on a taco chip you may be consuming a genetically modified food. Beware!

*Adapted from a WebQuest created by Sandra R. Holmes, MS RD. July, 2001.*
## Writing Assignment Scoring Guide

<table>
<thead>
<tr>
<th>Quality of Work</th>
<th>Excellent</th>
<th>Good Work</th>
<th>Needs Work</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas</strong></td>
<td>The topic is clear; arguments and opinions relate to the topic; good use of detail to support ideas; reader questions are answered.</td>
<td>The topic is too broad or too narrow to be developed; lacks support for ideas; transition from general topic to detail is weak; may stay on track with the topic, though lacks focus; all reader questions are not answered.</td>
<td>Topic is unclear or several topics are addressed; ideas are not fully developed or supported with detail; does not meet length requirements; content is repetitious or rambling; most reader questions are not addressed.</td>
<td></td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>The introduction pulls the reader in; transitions are smooth and relevant; ideas are in sequence; conclusion is clear and concise.</td>
<td>The introduction is clear though not compelling; transitions at times are bumpy or stray from main topic; sequencing shows some logic; conclusion is present though weak.</td>
<td>The introduction is weak or lacking; sequencing of ideas is unclear or random; transitions are not present; conclusion is weak or lacking.</td>
<td></td>
</tr>
<tr>
<td><strong>Voice</strong></td>
<td>Tone engages the reader in the topic; shows understanding and respect for intended audience; reader is challenged to consider writer’s idea or opinion.</td>
<td>Tone is sincere, but does not fully engage the reader; lacks some understanding of the intended audience; writer sparks interest, but cannot sustain reader's attention.</td>
<td>Tone seems indifferent to the reader; writing is monotone or mechanical; writer fails to connect or spark reader’s interest; work fails to present a point of view.</td>
<td></td>
</tr>
<tr>
<td><strong>Sentence Clarity</strong></td>
<td>Each sentence relates to the topic, and further develops the topic; sentences vary in length and beginnings; good use of transitions to tie sentences together.</td>
<td>Sentences relate to the topic, though the flow may be rough; variety is attempted in length or beginnings; some transitions are used.</td>
<td>Sentences are poorly constructed or rambling; sentence beginnings are repeated too often; transitions are weak or not used.</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Written paper is neat; margins, type size, type font, etc. are readable; good use of white space; easy to find title, subheadings, page numbers, bullets, etc.; charts, illustrations or graphics, if used, are integrated neatly and clearly.</td>
<td>Written paper is neat; type size, type font, etc. are readable; white space may be crowded or margins too tight; title, subheadings, page numbers, bullets, etc. may be lacking or inconsistent; charts, illustrations or graphics, if used, interrupt text.</td>
<td>Written paper lacks three or more of the following: neatness, margins, page numbers, bullets, title or subheadings; too many fonts are used or font size is difficult to read; charts, illustrations or graphics, if used, are confusing.</td>
<td></td>
</tr>
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</table>

Total __________
WebQuest Scoring Guide

Task #1 Presentation of Position Statement at the World Food Conference

<table>
<thead>
<tr>
<th>Quality of Work</th>
<th>Excellent</th>
<th>Good Work</th>
<th>Needs Work</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork</td>
<td>All presented parts of the presentation.</td>
<td>Some, not all presented parts of the presentation.</td>
<td>Only one person presented.</td>
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</tr>
<tr>
<td>Presentation Skills</td>
<td>Presented statement without reading from notes.</td>
<td>Read some from notes.</td>
<td>Read all from notes.</td>
<td></td>
</tr>
<tr>
<td>Content of Statement</td>
<td>Well researched and answers all the questions required by the role and task.</td>
<td>Good research and answers some of the questions required by the role and task.</td>
<td>Weak research; answers only one question required by the role and task. Statement lacks an opinion or provides limited facts to support that opinion.</td>
<td></td>
</tr>
<tr>
<td>Visuals</td>
<td>Each sentence relates to the topic, and further develops the topic; sentences vary in length and beginnings; good use of transitions to tie sentences together.</td>
<td>Sentences relate to the topic, though the flow may be rough; variety is attempted in length or beginnings; some transitions are used.</td>
<td>Sentences are poorly constructed or rambling; sentence beginnings are repeated too often; transitions are weak or not used.</td>
<td></td>
</tr>
<tr>
<td>Written Statement</td>
<td>A written essay, with proper sentence structure, and no grammatical or spelling errors.</td>
<td>A written essay with some proper sentence structure and/or some grammatical or spelling errors.</td>
<td>A written essay without proper sentence structure and/or many grammatical or spelling errors.</td>
<td></td>
</tr>
<tr>
<td>Deadlines</td>
<td>Did submit a complete written assignment on time.</td>
<td>Did submit a partially completed written assignment on time.</td>
<td>Did not submit any part of written assignment for this project on time.</td>
<td></td>
</tr>
</tbody>
</table>

Total ______
WebQuest Scoring Guide

Task #2 Position Paper on Labeling and Safety of Genetically Engineered Foods

<table>
<thead>
<tr>
<th>Quality of Work</th>
<th>Excellent</th>
<th>Good Work</th>
<th>Needs Work</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content of Position Paper on Food Labeling</td>
<td>Excellent position statement that addresses the questions fully.</td>
<td>Good position statement that fully addresses most of the questions, or partially addresses all of the questions.</td>
<td>Weak position statement that does not clearly address the questions.</td>
<td></td>
</tr>
<tr>
<td>Content of Position Paper on Safe or Harmful Effects</td>
<td>Excellent position statement that addresses the questions fully.</td>
<td>Good position statement that fully addresses most of the questions, or partially addresses all of the questions.</td>
<td>Weak position statement that does not clearly address the questions.</td>
<td></td>
</tr>
<tr>
<td>Ideas</td>
<td>The topic is clear; arguments and opinions relate to the topic; good use of detail to support ideas; reader questions are answered.</td>
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<tr>
<td>Organization</td>
<td>The introduction pulls the reader in; transitions are smooth and relevant; ideas are in sequence; conclusion is clear and concise.</td>
<td>The introduction is clear though not compelling; transitions at times stray from main topic; conclusion is present though weak.</td>
<td>The introduction is weak or lacking; sequencing of ideas is unclear or random; transitions are not present; conclusion is weak or lacking.</td>
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<td>Sentence Clarity</td>
<td>Each sentence relates to the topic, and further develops the topic; good use of transitions to tie sentences together.</td>
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<td>Written paper lacks three or more of the following: neatness, margins, page numbers, bullets, title or subheadings; too many fonts are used or font size is difficult to read; charts, illustrations or graphics, if used, are confusing.</td>
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</tr>
</tbody>
</table>

Total ______
Unit 1
Comprehend Nutrition Principles

Practical Problem:
How do I determine my nutrition needs based on my lifestyle?

Missouri Family and Consumer Sciences Competencies:
(B-1) Describe the effects of nutrients on health, growth, appearance and performance
(B-2) Identify nutrient sources
(B-3) Use various nutrition guidelines (e.g., Food Guide Pyramid, Dietary Guidelines, Dietary Reference Intakes)
(B-4) Compare and contrast nutrient/caloric composition of foods

Enabling Objectives for Competency Mastery:
1. Identify the six major groups of nutrients.
2. Evaluate how nutrients contribute to good health.
3. Describe the effects of poor nutrition on overall health.
4. Explain the three main functions of nutrients.
5. Plan a variety of meals using the various nutrition guidelines.
6. Propose ways to use various nutrition guidelines in planning to meet nutrition and wellness needs.

Teacher Background Information

Rationale
National studies and targeted research indicate there is a clear relationship among diet, health, and disease prevention. Information regarding healthy eating behaviors, lifestyle, and nutrition knowledge are essential components for long-term health and wellness. Good physical health includes having enough energy to meet the demands of your day, maintain a normal growth rate, and resist illness.

Good health depends on a combination of things such as heredity, lifestyle, personality traits, mental health, attitude, and environment. Food alone cannot make you healthy, but food does contain essential nutrients needed for good health. In this unit, we will look at the role these essential nutrients play in contributing to good health.
Comprehend Nutrition Principles

Background and Reference Information for this Unit

The focus of this unit is on nutrients and their functions and the use of the nutrition, dietary guidelines and resources developed through the Center for Nutrition Policy and Promotion (CNPP), an agency of the United States Department of Agriculture’s (USDA) Food, Nutrition and Consumer Services. The CNPP works to improve the health and well-being of Americans by developing and promoting dietary guidance that links scientific research to the nutrition needs of consumers.

The CNPP operates a comprehensive website providing the latest nutrition and dietary information and web links to resources and materials for use by consumers, policymakers, and professionals in health, education, industry and the media. For this reason, we have not provided specific background and reference information for this unit. Rather, we recommend that family and consumer sciences teachers visit the CNPP website at http://www.usda.gov/cnpp/ to access the most current background information and resources to address the competencies outlined in this unit.

Instructional Strategies

1. Identify the six major groups of nutrients. (Competencies B-1, B-2 and B-3)
   a. Use Fact Sheet #1: Nutrients Your Body Needs to create a graphic organizer such as a mind map to identify the six essential nutrients every person needs for good overall health.

   Teacher Note: The following graphic organizer is an example of a Mind Map. A blank mind map, Activity Sheet #1: Your Map of the Six Essential Nutrients is included with this unit for use with students. You may choose a different style of graphic organizer for this activity. Rather than listing information about each nutrient, you might choose to list each nutrient and the part of the body or function of that nutrient.

Questions for Discussion/Formative Assessment

- Think of these essential nutrients as players on a team like basketball or baseball. What is likely to happen if one player is missing, or just not performing well?
- Which nutrient is the most important for your body? (Water—A person can only live about 7 to 10 days without water. The body can survive several weeks without other nutrients because some are already stored in the body.)
- Based on what you have learned about which foods contain certain essential nutrients, why do you think it is important to eat a variety of foods?

2. Evaluate how nutrients contribute to good health. (Competency B-1)
   a. Bring to class, the Nutrition Facts food label from a variety of breakfast cereals. Try to get a wide variety of cereal labels from corn flakes, bran cereals, oatmeal, granola, and children’s favorites. Divide the class into groups to analyze the
labels. Use a large piece of chart paper or a sheet of newsprint to create a comparison chart. List the brand of cereal and Daily Values for each of the essential nutrients. Evaluate which cereals provide the widest range of nutrients, which cereals would the groups recommend for a healthy diet rich in essential nutrients.

Variation/Enrichment: Select other breakfast foods such as peanut butter and jelly sandwiches, poached eggs and toast, omelet, cinnamon rolls, breakfast bar or drink. Add the daily values for these foods to the cereals chart. Determine which breakfast option provides the most essential nutrients.

b. Water is essential for life. Use Fact Sheet #2: Cool Facts About Water as a discussion starter about why water is important for good health. How does the body use water to maintain good health? Here are a few examples of how the body uses water:

- Carries nutrients throughout the body.
- Carries away waste.
- Moistens eyes, mouth, and nose.
- Keeps the skin moist.
- Regulates blood volume. Blood is over 80% water.
- Is the main component of body fluids.
- Protects against heat exhaustion and stroke.
- Acts as insulation in the cold.
- Helps carry medicines to the proper places in the body.
- Lubricates the body’s joints.
- Keeps the body cool when it’s hot (perspiration).

c. Pure water is the best way to obtain this essential nutrient. Juice and milk make good beverage options. Other beverage choices -- coffee, tea, soft drinks and alcoholic drinks don’t offer the nutritional benefits of milk or juice and may actually increase water loss due to the diuretic effect of alcohol and caffeine. Use Fact Sheet #3: Water in the Foods We Eat to explore other sources of water for the body.

3. Describe the effects of poor nutrition on overall health. (Competency B-1)

a. Divide the class into five or six groups to research health concerns related to poor diet. Some diseases related to poor nutrition include heart disease, certain types of cancer such as colon cancer, hypertension, diabetes, stroke, and osteoporosis. Additional topics might include childhood obesity, special dietary concerns for pregnant women.

4. Explain the three main functions of nutrients. (Competencies B-1, B-3, B-4)

a. The three main functions of nutrients in the body are to provide energy; build and repair the body; and regulate normal functioning of the body. Create a chart with three columns and six rows, and write the three functions across the top, with one listed in each column. List the six nutrients down the left side with one in each row. Decide which function(s) each nutrient provides.
### Comprehend Nutrition Principles

#### Answer Key:

<table>
<thead>
<tr>
<th></th>
<th>Energy</th>
<th>Build/Repair</th>
<th>Regulate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proteins</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fats</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Vitamins</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Minerals</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

5. **Plan a variety of meals using various nutrition guidelines.** (Competencies PS/B-2, B-3)

   Teachers should use information/resources from the CNPP website to develop instructional strategies for this enabling objective. [www.usda.gov/cnpp/](http://www.usda.gov/cnpp/)

6. **Propose ways to use various nutrition guidelines in planning to meet nutrition and wellness needs.** (Competencies B-2, B-3, B-4)

   a. Use **Activity Sheet #2 Nutrition Advice for a Friend Student** to evaluate a week-long food diary. Work individually or in pairs to make your recommendations.

   Teachers can also use information and resources from the CNPP website to develop additional instructional strategies for this enabling objective. [www.usda.gov/cnpp/](http://www.usda.gov/cnpp/)

#### Summative Assessments

**Paper and Pencil**

1. In pairs, or individually, write a column for the school newspaper that provides information and ideas about how to use the *Dietary Guidelines for Americans, 2005*.

   Develop a scoring guide to assess your work. (Competency B-3)

**Classroom Experiences**

1. **FCCLA Activity.** Develop a Student Body project to work with student athletes in your school. Propose a set of meal plans based on information from the Dietary Guidelines for Americans, 2005. The meal plans can be bound into a booklet and distributed to each student athlete. Nutrition tips can be scattered throughout the booklet. (Competencies B-1, B-4)
Nutrients Your Body Needs

Carbohydrates
Your body prefers to burn carbohydrates for energy. Carbohydrates burn longer and more efficiently than other nutrients. They provide a steady supply of energy to keep you going. There are two types of carbohydrates, complex and simple. Complex carbohydrates fall into two subcategories—starches and dietary fiber. Simple carbohydrates are sugars found naturally in many foods.

Complex Carbohydrates
Starches take more time for the body to break down. They burn more slowly and therefore provide a steady source of energy to keep the body going. Examples of foods containing starches are potatoes, rice, pasta, peas, carrots, and breads.

Dietary Fiber is the only carbohydrate that does not provide energy. It is found only in food sources from plants such as dry beans, vegetables, fruits, whole wheat, oats, or wheat bran products.

Simple Carbohydrates
There are several types of Sugars that are found naturally in foods. Fructose, maltose, lactose, and sucrose are names for sugars that occur in various types of foods. Fructose is found in fruits, maltose is a part of grain products, lactose occurs in dairy products, and sucrose is the refined sugar you know as table sugar. Sugars burn much faster than starches in the body. Sugars provide quick energy or bursts of energy.

Protein
While proteins can provide energy for the body, this nutrient functions best at building and repairing the body rather than fueling it. If you don't consume enough carbohydrates for daily energy needs, your body is forced to burn protein for fuel. When protein is used for fuel, the body does not receive needed repairs and is more likely to get sick or run down. Proteins are made up of chemical building blocks known as amino acids. Imagine a set of Lego toys. With just these basic pieces you can arrange and rearrange them into many different things from a bridge to a fort to a space rover. The amino acids that make up proteins are like Legos. The same basic chemical elements can be arranged and rearranged into many different proteins. There are 22 known proteins that are divided into two categories; complete protein and incomplete protein. The body can make 13 of them. The remaining nine must come from food sources. Good sources of protein come from meats, poultry, fish, eggs, dry beans, peanuts, soybeans, and peas.

Complete Protein
The proteins that supply all nine essential amino acids that the body cannot produce are called complete proteins. By eating one food source your body can obtain all of the nine amino acids that it is unable to produce itself.

Incomplete Proteins
There are a number of foods that contain protein with some of the nine essential amino acids, but not all of them. These proteins are Incomplete. You need to combine different incomplete proteins together for your body to get all nine of the essential amino acids.
Comprehend Nutrition Principles

Fact Sheet #1 Continued

<table>
<thead>
<tr>
<th>Nutrients Your Body Needs (continued)</th>
</tr>
</thead>
</table>
| **Fats**
The body uses some fats right away to promote healthy skin and cell growth. Fats carry vitamins A, D, E and K throughout the body where needed. Extra fat is stored by the body to use later, sort of a backup supply of energy. Fats are an essential nutrient in the body, however, too much of a good thing may not be healthy. Many studies indicate that Americans consume too many calories from fats.

**Vitamins**
Vitamins contribute to healthy bodies in many ways. They are critical for the formation of blood cells, hormones, neurotransmitters which are chemicals used by the nervous system, and DNA. Vitamins improve the body's ability to use carbohydrates, proteins, and fats. There are two types of vitamins, fat soluble and water soluble.

- **Fat Soluble Vitamins**
  Vitamins A, D, E and K are fat soluble. During digestion the liver produces bile that breaks down fat containing these vitamins. Once the food is broken down, the vitamins are released and can be absorbed by the body. Excess amounts of these vitamins are stored in body fat; therefore you don't need to consume these vitamins every day.

- **Water Soluble Vitamins**
  Vitamins C, B1 (thiamine), B2 (riboflavin), B3 (niacin), B6, B12 and folic acid dissolve in the body easily and are eliminated in urine if not absorbed during digestion. Foods containing water soluble vitamins need to be eaten every day to maintain a steady supply of these nutrients.

**Minerals**
Your body needs tiny amounts of metallic elements known as minerals for healthy growth of teeth and bones. Minerals also contribute to muscle contractions, nerve reactions, and normal blood clotting. **Macrominerals** include calcium, chlorine, magnesium, phosphorous, potassium, sodium, and sulfur. **Trace minerals** the body needs are chromium, copper, fluoride, iodine, iron, selenium and zinc.

**Water**
A person can survive weeks with no food. The body can rely on nutrients stored up for some time. However, a person could only survive about a week with no water. The human body is 65 percent water and it uses about two to three quarts of water each day through normal functions such as perspiration and urination. While water and foods containing water do replenish the needs of the body, drinks containing caffeine or alcohol actually dehydrate the body by increasing the amount of urine the body produces.

Water does not provide the body with energy, it has no caloric value. However, it is essential for functions such as digestion and elimination. Water maintains the natural balance between salts that are dissolved inside and outside of cells. Water also provides cushioning for joints and soft tissues.
Cool Facts About Water

√ There is the same amount of water on Earth as there was when the Earth was formed. The water from your faucet could contain molecules that dinosaurs drank.

√ Nearly 97% of the world’s water is salty or otherwise undrinkable. Another 2% is locked in ice caps and glaciers. That leaves just 1% for all of our needs such as agricultural, residential, manufacturing, community, and personal needs.

√ Water regulates the Earth’s temperature. It also regulates the temperature of the human body. It carries nutrients and oxygen to cells, cushions joints, protects organs and tissues, and removes wastes.

√ 75% of the human brain is water and 75% of a living tree is water.

√ A person can live about a month without food, but only about a week without water.

√ Water is part of a deeply interconnected system. What we pour on the ground ends up in our water, and what we spew into the sky ends up in our water.

√ The average total home water use for each person in the U.S. is about 50 gallons a day.

√ The average cost for water supplied to a home in the U.S. is about $2.00 for 1,000 gallons, which equals about 5 gallons for a penny.

√ Water expands by 9% when it freezes. Frozen water (ice) is lighter than water, which is why ice floats in water.

Reprinted from the University of Illinois College of Agriculture, Consumer and Environmental Sciences.
## Water in the Foods We Eat

<table>
<thead>
<tr>
<th>Food</th>
<th>Water Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce</td>
<td>96%</td>
</tr>
<tr>
<td>Cucumber</td>
<td>95%</td>
</tr>
<tr>
<td>Skim Milk</td>
<td>91%</td>
</tr>
<tr>
<td>Honeydew Melon</td>
<td>89%</td>
</tr>
<tr>
<td>Carrot</td>
<td>88%</td>
</tr>
<tr>
<td>Apple</td>
<td>86%</td>
</tr>
<tr>
<td>Orange</td>
<td>86%</td>
</tr>
<tr>
<td>Pear</td>
<td>84%</td>
</tr>
<tr>
<td>Egg (fresh, whole)</td>
<td>76%</td>
</tr>
<tr>
<td>Banana</td>
<td>74%</td>
</tr>
<tr>
<td>Blueberries</td>
<td>54%</td>
</tr>
<tr>
<td>Baked Potato</td>
<td>46.5%</td>
</tr>
<tr>
<td>Whole Wheat Bread</td>
<td>37%</td>
</tr>
<tr>
<td>Cheddar Cheese</td>
<td>36%</td>
</tr>
<tr>
<td>Wheat Bran Muffin</td>
<td>35%</td>
</tr>
<tr>
<td>Plain Bagel</td>
<td>32%</td>
</tr>
<tr>
<td>Soft-spread Margarine</td>
<td>16%</td>
</tr>
<tr>
<td>Almonds</td>
<td>5%</td>
</tr>
<tr>
<td>Raisin Nut Bran Cereal</td>
<td>4%</td>
</tr>
<tr>
<td>Rice Krispy Cereal</td>
<td>3%</td>
</tr>
<tr>
<td>Chunky Peanut Butter</td>
<td>1%</td>
</tr>
<tr>
<td>Corn Oil</td>
<td>0%</td>
</tr>
<tr>
<td>Olive Oil</td>
<td>0%</td>
</tr>
<tr>
<td>Canola Oil</td>
<td>0%</td>
</tr>
</tbody>
</table>

Your Map of the Six Essential Nutrients

Create a mind map of information you have learned about the six essential nutrients. Add additional lines and circles as needed.
**Nutrition Advice for a Friend**

Your friend Isaac wants to improve his eating habits for better long-term health. Read over Isaac's food journal for the past week. Based on your knowledge of the Dietary Guidelines for Americans, 2005, what would you tell him to change? Estimate which food groups you think he is getting enough nutrients from, not enough from, and possibly too much.

<table>
<thead>
<tr>
<th>Day</th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Dinner</th>
<th>Snacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Bagel, butter, soda</td>
<td>Double cheeseburger, french fries, soda</td>
<td>Pepperoni pizza, bread sticks, soda</td>
<td>Cheese curls after school</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Leftover pizza, orange soda</td>
<td>Baked potato with cheese and chili, soda</td>
<td>Ham &amp; swiss cheese sandwich, chips, strawberry jello, chocolate shake</td>
<td>String cheese after school, pretzels and soda after baseball practice</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Toaster waffle, syrup, Hi-C drink</td>
<td>Beef burrito, tortilla chips and cheese, soda</td>
<td>Fried chicken strips, mashed potatoes with gravy, dinner roll with butter, soda</td>
<td>Peanut butter crackers after school</td>
</tr>
<tr>
<td>Thursday</td>
<td>Running late – no breakfast</td>
<td>Two grilled cheese sandwiches, carrots, potato chips, grape soda</td>
<td>Spaghetti with meat sauce, bread sticks, soda</td>
<td>Two chocolate chip cookies and soda after school, candy bar after baseball practice</td>
</tr>
<tr>
<td>Friday</td>
<td>Danish, banana smoothie</td>
<td>Chicken nuggets, macaroni and cheese, carrots, soda</td>
<td>Double cheeseburger, french fries, buttered corn, soda</td>
<td>Leftover carrots from lunch, soda</td>
</tr>
<tr>
<td>Saturday</td>
<td>Pop Tart</td>
<td>Spaghetti from a can, soda</td>
<td>Pepperoni pizza, small salad, brownie</td>
<td>Popcorn with butter and a soda at the movies, sugar cookies at Rob’s house</td>
</tr>
<tr>
<td>Sunday</td>
<td>Ham and cheese omelet, juice</td>
<td>Leftover pizza, brownie, soda</td>
<td>Beef burrito, tortilla chips with salsa, last of mom’s brownies, soda</td>
<td>Brownie when mom wasn’t looking, granola bar in the afternoon</td>
</tr>
</tbody>
</table>
Unit 1
Healthy Eating Habits

Practical Problem:
How do I develop eating patterns that will promote good health now and for the future?

Missouri Family and Consumer Sciences Competencies:
(C-1) Propose eating patterns that promote health.
(C-2) Examine special nutritional needs (e.g., sports nutrition, modified diets, food supplements).
(C-3) Examine changes in food and nutrient needs across the life span.

Enabling Objectives for Competency Mastery:
1. Recommend diet planning principles for good health.
2. Apply the Dietary Guidelines for Americans to overall health habits.
3. Describe characteristics of individuals who may have special nutritional needs.
4. Propose meal plans for individuals with special nutritional needs.
5. Compare nutritional needs of children, adolescents, adults, pregnant women, and the elderly.

Teacher Background Information

Rationale

The nutrition and lifestyle habits that students develop now will influence their health and wellness in later years. Americans spend billions of dollars annually to lose weight, get in shape, or purchase supplements to improve their overall health and physical fitness. Many of these practices are not healthy and can cause long-term health consequences. Poor habits, lack of accurate information, overwhelming misinformation and peer pressure cause many adolescents to jeopardize their health. Accurate information about nutrition and good decision-making skills will help teens improve their health now and for the future.

Background

Good health habits contribute to wellness throughout a person’s life. Nutritional needs begin even before birth and continue throughout the life cycle. In Missouri today there are nearly twice as many overweight children and almost three times as many overweight adolescents as there were in 1980 (roughly one generation ago). Missouri ranks higher than the national average for overweight youth.

A 2003 survey by the American Dietetic Association Foundation reports that parents outrank all others as children’s role models for health habits. Parents outranked sports celebrities and actors by all groups surveyed. Children ages 8-12 reported their top role
model was their mother (23%) or father (17.4%). Teens age 13 to 17 said their mother was most influential (13.8%) and no one (13.4%). The survey shows that the influence of any role model does decrease as the children get older.\(^1\)

While parents are very important in helping children develop healthy eating habits, schools play an important role as well. The Missouri Coordinated School Health Coalition developed recommendations to help schools, families and communities work together in many ways such as:

- Developing policy and program guidelines for schools.
- Strengthening physical activity requirements, standards and programs in schools.
- Implementing nutrition policies and education programs.
- Fostering school and community partnerships that promote regular physical activity.
- Engaging students, school faculty, families and communities in promoting healthy eating and regular physical activity.
- Increasing awareness of the problem and of solutions.

The full report by the Missouri Coordinated School Health Coalition is available online at: [http://dese.mo.gov/divimprove/curriculum/hp/HealthyWeight.pdf](http://dese.mo.gov/divimprove/curriculum/hp/HealthyWeight.pdf)

**Information Does Not Change Behavior**

Several independent reports state that providing only factual information about health-related topics does not influence students to develop or change their behavior. It is essential to include the skills for weight management and behavior change in addition to the nutrition knowledge. Programs that involve students in peer education have also shown positive outcomes. Research indicates that the best predictor of future behaviors is the intention to engage in the behavior (this relates to goal-setting).

Nutrition knowledge, eating patterns, and physical activity levels are all essential to overall health and long-term wellness. Risk factors related to obesity include: diabetes, high blood pressure, high cholesterol and triglycerides, arthritis, gall bladder disease, some cancers, and even lung problems. In efforts to help many consumers “lose more weight faster,” a variety of fad diets have received a great deal of media attention. It can be overwhelming to sort out the facts from the promises, and to determine the long-term health risks associated with many of these “proven successful diets.” The American Dietetic Association recommends *Variety, Balance and Moderation* in food choices. These guidelines are generally not a part of a fad diet.

Important lifestyle factors also play a large role in maintaining good health. Positive health habits include:

- 7 to 8 hours of sleep each night
- healthy eating habits
- maintaining a healthy weight (yo-yo dieting can be as harmful as being overweight)
- regular physical exercise
- carefully selecting and using equipment to avoid risk of injury
• performing self-examinations frequently
• 6 to 8 glasses of water each day (approx 64 oz)

Guidelines for Healthy Eating

• Aiming for regular meals and snacks
• Hitting most of the major food groups each day to meet your needs for growth and health
• Balancing nutrition-rich foods with moderate amounts of other foods like sweets or fast foods
• Eating when hungry and stopping when full
• Learning about nutrition, but keeping your food as just one important part of your life

Weight Helps Determine Health

Good health begins with a healthy weight. Body Mass Index (BMI) is one “tool” for comparing body weight relative to height. The greater your weight compared to your height, the greater your risk for weight-related health problems. BMI does not measure body fat; however individuals with a higher BMI tend to have higher percentages of body fat. A BMI between 18.5 and 24.9 is considered optimal.

Health professionals advise those who are overweight to lose weight gradually. Approximately two pounds per week in weight loss is maximum recommended. Sometimes, people with serious health problems associated with obesity may have legitimate reasons for losing weight rapidly. If so, a physician’s supervision is required. A person’s weight is the result of several factors:

• how much and what kinds of food you eat
• whether your lifestyle includes regular physical activity
• whether you use food to respond to stress and other situations in your life
• your physiologic and genetic make-up
• your age and health status

Successful weight loss and weight management should address all of these factors. Products and programs that promise quick and easy results, or that promise permanent results without permanent changes in lifestyle are not based on healthful practices.

Inches, Pounds, and Calories

Inches measure height; pounds measure weight; and calories measure energy. One calorie is the amount of energy needed to raise the temperature of 1 gram of water by 1 degree Celsius. In food, calories are found in three nutrients: carbohydrates, proteins, and fats. During digestion the nutrients are taken from the foods and absorbed into the bloodstream. The nutrients are then converted into glucose. The food energy held in the glucose is delivered to every cell in the body. Energy may be burned immediately to
power activities such as your heartbeat, blinks of your eye, sit-ups, or swimming. Energy not needed immediately is stored in fat in case it is needed later.

Calories are available in most foods. The amount of calories will vary widely among foods. The calories are locked in the nutrients carbohydrates, proteins, and fats. Calories are also provided by alcohol, however alcohol contains no nutrients. Fueling the body with alcohol actually starves the body of the nutrients it needs to maintain health.

<table>
<thead>
<tr>
<th>Source of Energy</th>
<th>Calories Per Gram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fats</td>
<td>9</td>
</tr>
<tr>
<td>Alcohol</td>
<td>7</td>
</tr>
<tr>
<td>Carbohydrates</td>
<td>4</td>
</tr>
<tr>
<td>Proteins</td>
<td>4</td>
</tr>
</tbody>
</table>


Special Nutritional Needs

Throughout a person’s life their body will always need the same nutrients. However, the amount of the nutrients will change over time. Some groups of people have special nutritional needs that are different from the general population. A few examples are pregnant women, children, older adults, and athletes.

The Dietary Guidelines for Americans, 2005 may not always apply to people who need special diets because of diseases or conditions that affect normal dietary needs. By making minor changes to regular recipes, many people who have special dietary needs can eat the same things as other members of the family. Special needs might include a lower sodium diet, a lower fat diet, a lower cholesterol diet, or food allergies.

Pregnant Women

A pregnant woman needs more nutrients to help her baby grow and get a healthy start in life. If the mother is eating a well-balanced diet before becoming pregnant, she will only need to make a few dietary changes. According to the American College of Obstetricians and Gynecologists (ACOG), pregnant women should increase their usual servings of a variety of foods from the four basic food groups to include the following:

- Four or more servings of fruits and vegetables for vitamins and minerals
- Four or more servings of whole-grain or enriched bread and cereal for energy
- Four or more servings of milk and milk products for calcium
- Three or more servings of meat, poultry, fish, eggs, nuts, dried beans and peas for protein

Most physicians agree that the Recommended Daily Allowances (RDAs), except those for iron, can be obtained through a proper diet. Pregnant and lactating adult women require an additional 40% of calcium a day (1200-1500 mg per day). Almost all of the extra calcium goes into the baby’s developing bones. To get this extra calcium, 3 extra servings (3 cups) of milk or dairy products are needed. The mother should consume 2,000 to 8,000 milligrams of sodium a day during pregnancy. There are 2,325 milligrams
of sodium in one teaspoon of salt, and because salt is in most foods, the increased need for it during pregnancy is not too difficult to achieve. Sodium helps to regulate the water in the body.

Pregnant women need plenty of fluids, especially water. A woman's blood volume increases dramatically during pregnancy. Drinking at least eight glasses of water a day can help prevent common problems such as dehydration and constipation. Pregnancy doubles a woman's need for folate (folic acid or folacin). Folic acid has been shown to be important in preventing neural tube defects, such as spina bifida and anencephaly and is essential to the formation of red blood cells. Folic acid can be found in many foods, including kidney beans, leafy green vegetables, peas, and liver. Women in their childbearing years should consume plenty of these foods. In fact, folate is so important to the health of women and their babies that the Food and Drug Administration (FDA) recently required the addition of folic acid to prepackaged bread and cereals.

Infants and Children

For the first few months babies need only mother's milk or formula. Mother's milk is rich with nutrients and antibodies an infant needs. Infant formula is fortified with essential nutrients. Most doctors recommend using a formula enriched with iron. MyPyramid will help a breastfeeding mother be sure she is meeting her nutritional needs.

At four to six months babies are able to eat infant cereals and strained fruits and vegetables. Around seven to nine months babies can digest strained meat and poultry, unsweetened juice, and teething crackers. Chopped foods that are soft, unsweetened dry cereal, cooked pasta such as macaroni can be served to infants when they are about 10 to 12 months old.

After the first year toddlers will begin to eat many of the foods the family eats. By introducing new foods to the toddler one at a time, the parent can determine if the child may have a food allergy. Since a toddler cannot eat a lot of food at one time, they should have two to three snacks throughout the day. Refer to MyPyramid at www.MyPyramid.gov for needs of children at specific ages.

Calcium, iron and fiber are especially important for children. Calcium is the major mineral that strengthens bones. Bone calcium begins to decrease in young adulthood and progressive loss of bone calcium occurs throughout life, particularly in women. The school-age and teen years are the time to prevent the bone disease osteoporosis because peak bone mass and calcium content of the skeleton is reached during the teen years.

Iron is another essential nutrient in a child's diet. Iron deficiency can lead to fatigue, irritability, headaches, lack of energy, and tingling in the hands and feet. Significant iron deficiency can lead to iron-deficiency anemia. Teen boys need extra iron to support their rapid growth, and teen girls need enough iron to replace what they lose once they begin menstruating. Many teenage girls are at risk for iron deficiency because they often don't eat enough foods containing iron to offset the blood loss. Teens can lose significant amounts of iron through sweating during intense exercise.

Dietary fiber can help in reducing the chances of heart disease and cancer later in life, and fiber helps promote bowel regularity. MyPyramid provides suggestions for fruit and vegetable consumption each day along with whole-grain breads and cereals to ensure
that each child gets enough fiber. Too much fiber in the diet can interfere with the body's absorption of essential vitamins and minerals.

Breakfast is essential for children to maintain overall health and have the energy needed to succeed in school. Breakfast really is the most important meal of the day. Snacks also are important to maintain a steady supply of nutrients throughout the day. However, snacks should be nutrient dense, not foods high in calories and low in nutrients.

Can food cause behavior problems in children? Research indicates that there is no connection between food and behaviors such as hyperactivity or poor impulse control. Hyperactivity, or attention-deficit/hyperactivity disorder (ADHD) is a learning disability. Dietary ‘treatments’ that some parents insist cure the disorder are more likely related to the ‘placebo effect’ than to the influence of food.

All children can feel ‘hyper’ or overly stressed at times. Common causes for children to act out may include:

- Too much caffeine from sodas or chocolate
- The desire for attention
- Lack of sleep or too much excitement
- Too much television
- Lack of exercise
- Chronic hunger

**Older Adults**

Energy needs often decrease for older adults as a result of lower metabolism and reduced physical activity. Nutrient needs are more likely determined by the individual’s medical history and genetics, than by age. Needs are much more individual than for other age groups. Use the MyPyramid calculator at [www.MyPyramid.gov](http://www.MyPyramid.gov) to determine needs for adults over 70.

The quality of life for people living to age 85 and older is steadily improving. In the United States the segment of the population that is 85 or older is growing faster than any other age group in our society. Chronic disabilities have decreased and quality of life for this age group has increased in general. There are several factors that challenge older adults to choose a healthy diet such as whether they live alone, some medical conditions, difficulty chewing due to tooth loss, or a loss of taste sensitivity. Other factors include whether the older adult takes multiple medications or abuses alcohol.

**Tips for older adults**

- Eat breakfast every day.
- Select high-fiber foods like whole grain breads and cereals, beans, vegetables, and fruits.
- Have three servings of low-fat milk, yogurt, or cheese a day. Dairy products are high in calcium and vitamin D and help keep bones strong, or take a calcium and vitamin D supplement.
• Drink plenty of water. Some older adults say they feel less thirsty, but their bodies still need the same amount of water.
• Talk with a health care provider about ways to safely increase physical activity. For example, take short walks throughout the day.
• Get enough sleep.
• Stay connected with family, friends, and community.

Source: Healthy Eating & Physical Activity Across Your Lifespan.

*LIFE EXPECTANCY* is the average number of years people in a given society live. The life expectancy for white males in the United States is different than the life expectancy for males in the Czech Republic, for example. Life expectancy is influenced by gender, race, genetics, and many lifestyle factors. Advances in medical technology led to almost a 100% increase in life expectancy during the twentieth century.

*LIFE SPAN* is the maximum number of years of life that a member of a species can attain. Human have a life span of about 130 years although very few people have actually attained that age.

*LONGEVITY* is the duration of one person’s life. Scientists who study the aging process have found no diet or nutrient supplement that will increase longevity, though there are many claims to the contrary by the manufacturers of nutritional supplements.

**Athletes**

The physical demands of athletic training and competition increase the athlete’s need for nutrients. Whether competitive or recreational, the body cannot perform at its peak without proper nutrition. Athletes need a diet that provides enough energy in the form of carbohydrates and fats as well as essential protein, vitamins and minerals for the added physical activity. A diet containing 55-60 percent of calories from carbohydrates (10 to 15 percent from sugars and the rest from starches), no more than 30 percent of calories from fat and the remaining (about 10-15 percent) from protein is recommended.

Nutrition and fitness experts recommend eating a variety of foods every day - grains, vegetables, fruits, beans, lean meats, and low fat dairy products. The foundation of the athlete’s diet should come from carbohydrates in the form of starches and sugars. Fluids, especially water, are also important to the winning combination.

Dehydration can be a threat to good athletic performance. Heat stroke caused by severe dehydration ranks second among the reported causes of death among high school athletes.

**Modified Diets for Health**

Special modified diets are recommended for those with, or at risk for, a number of medical conditions such as diabetes, heart disease, hypertension, lactose intolerance. Many people with one of these conditions can eat regular foods by making some modifications to their overall diet.

A heart healthy approach to diet will include consuming a variety of fruits, vegetables, and grains (especially whole grains). To achieve a healthy balance of cholesterol, limit
foods high in saturated fats. Lower the amount of sodium consumed to less than 6 grams per day.

The American Cancer Institute provides information online for diet modifications for those who have been diagnosed with cancer. See the Web Resources section for the URL.

Dietary Supplements

Some have suggested that it would be easier to ensure a healthful diet by relying solely on food supplements such as pills, liquids, or powders that contain purified nutrients in specific amounts. Scientists have been successful in developing diets containing precise chemical compositions for people who are hospitalized and cannot eat ordinary foods. However, healthy people do not need these types of supplements and cannot survive long-term on this form of nutrition. Foods are chemically complex and cannot be fully reproduced in a laboratory.

The human body is designed to digest food using the digestive organs and processes. When the digestive organs such as the stomach and intestines are not used to digest foods they begin to weaken and eventually cannot function fully. The intestine releases hormones during the digestive process, these hormones send messages to the brain that trigger satisfaction.

Nutrition supplements have not been found to be better solutions for health than a balanced diet. Yet consumers spend an estimated $5 to $10 million. The Dietary Supplement Health and Education Act (DSHEA) of 1994 requires manufacturers to provide labels on their products to help consumers make informed choices. The FDA does not regulate dietary supplements. Unlike foods, food additives and drugs, supplements do not require government approval to be marketed to the consumer. The definition of a dietary supplement is very broad to the point of being almost meaningless. High doses or ‘mega’ doses of a nutrient are harmful rather than beneficial. An appropriate supplement should provide the nutrients in an amount that is smaller than, or close to, the actual DRI recommended.

More people in the United States suffer from ‘overnutrition’ and poor lifestyle choices than from nutrient deficiencies. Better decisions about food choices and exercise generally are more effective than a dietary supplement.

Web Resources for Teachers


The Missouri Diet Manual was first printed in 1958 and is in its ninth revision. The purpose of the manual is to provide clear-cut practical information and guidelines in diet therapy for normal nutrition and modified diets. This manual has been prepared primarily for use by food and nutrition service personnel in Missouri hospitals and nursing homes. It includes information on modifying the diet for a number of special needs.

http://www.youngwomenshealth.org/healthyeating.html

Children's Hospital of Boston has created an important new initiative-- the creation of a Center for Young Women's Health-- the first of its kind in the nation.
Assess Nutrition and Wellness

Federal government Food and Nutrition Information Center website with many links to sites such as “Nutrition throughout the Lifecycle,” or “vegetarianism.”

http://www.kidshealth.org/
KidsHealth for Parents sponsored by the Nemours Foundation. KidsHealth is the largest and most visited site on the Web providing doctor-approved health information about children from before birth through adolescence. Provides families with accurate, up-to-date, and jargon-free health information.

http://www.cancer.gov/cancertopics/eatinghints/page1
The National Cancer Institute provides extensive information on types of cancer and diet suggestions.

http://nirc.cas.psu.edu/lifecyc.cfm
Penn State College of Agricultural Sciences houses the Nutrition Information and Resource Center (NIRC). This website includes links with additional resources for nutrition throughout the life cycle and for modifying recipes for special dietary needs.

References:


1Children’s role models for health: Parents outrank all others. August 1, 2003.
http://www.eatright.org/Public/index_16637.cfm;8/1/2003;1;2.


http://win.niddk.nih.gov/publications/young_heart.htm


Instructional Strategies

1. Recommend diet planning principles for good health. (Competencies C-1, C-2, C-3)
   
   a. Use the Buzz Group technique to discuss diet and dieting. Divide into groups of 3-5 students with one leader and one recorder in each group. The leader is to keep the group on task with the discussion and the recorder to summarize the ideas. Use Activity Sheet #1: Is Everyone On a Diet? or display the information on an overhead transparency. Work in groups for about 10 minutes, then the recorders from each group will share the ideas from their group with the whole class.

   b. Access the Dietary Guidelines For Americans, 2005, 5th Edition, USDA at: www.health.gov/dietaryguidelines/dga2005/document/. Either print out the full report or view the document online. Create posters to illustrate these guidelines and post them throughout the building for other students to view.

   c. Use Fact Sheet #1: Tips for Healthy Eating to discuss how habits can affect eating behavior. Rank these tips for yourself. Which tip do you feel will help you the most? List that tip as number 1, etc.

   d. Work individually if there are enough computers available for every student, otherwise divide into groups to explore nutrition facts. Use the Webquest Activity Sheet #2: Search for the Perfect Food to examine various food sources that contribute to a balanced diet. Use your nutrition knowledge to select the one food that you believe is the most perfect in terms of nutrient density. Develop an advertisement to “sell” the rest of the class on your idea.

   e. Access one of the online information sources below related to Nutrition Supplements:

      National Institutes of Health, Office of Dietary Supplements, Dietary Supplements: Background Information.

Questions for Discussion/Formative Assessment

- What are the guidelines for healthy eating?
- Who developed these guidelines? What motives might they have for selecting these guidelines?
- How often are the guidelines revised or updated?
- When will they be reviewed again?
- Are there some people who could not follow these guidelines, or could anyone follow these guidelines for good health?
- Which guideline is the most difficult for you to follow?
- What changes might you make in your eating habits to meet these recommendations?
Assess Nutrition and Wellness

U.S. Food and Drug Administration
http://www.cfsan.fda.gov/~dms/ds-oview.html

U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition

Gateway to Government Food Safety Information
http://www.foodsafety.gov/~fsg/dietsupp.html

Review the information about possible health risks, label information, and lack of FDA regulation. Take a poll of students in the class to determine how many believe these foods should be regulated and how many believe the consumer should have the freedom from this type of government regulation. Discuss the implications to the consumer and manufacturer when there are tight regulations and when the regulations are very loose.

2. Apply the Dietary Guidelines for Americans to overall health habits. (Competencies C-1, C-3)

   a. Examine the Dietary Guidelines For Americans, 2005. Conduct a school survey to determine how many students are aware of the Guidelines. How many know that these Guidelines exist? How many students know where to find more information about the Guidelines? How many students say they would like to learn more about healthy eating? Report back to class on your survey findings. Compile the survey data for the school newspaper.

   b. The following website from the Food and Information Center includes a link to dietary guidelines from around the world:
http://www.nal.usda.gov/fnic/dga/index.html There are guidelines for many countries including Canada, Ireland, Germany, Hong Kong, Italy and many more. Assign students to groups of two or three to research one country and compare the guidelines to the United States. Report back to the full class with the comparisons.

   c. The Dietary Guidelines for Americans are reviewed every five years to determine if revisions are needed based on recent scientific findings. The current guidelines were published in 2005. The Dietary Guidelines Advisory Committee, a committee of prominent experts in nutrition and health, reviewed the 2000 Dietary Guidelines and determined that a revision was appropriate. Develop public service announcements to submit to local media to raise awareness about the Dietary Guidelines in your community. This can

Questions for Discussion/Formative Assessment

- How many of the guidelines are related to foods and nutrition, and how many are related to physical activity?
- Which guidelines require the consumer to have information, and which guidelines are based on consumer behavior? (Knowing facts vs. making decisions)
be part of an FCCLA Student Body Project for community awareness. If a new review is underway, monitor the progress of the review committee to determine what revisions, if any, are recommended.

### Questions for Discussion/Formative Assessment
- Why do the Guidelines change?
- Are all groups of people such as children, pregnant women, or older adults included in these recommendations?
- Do you believe most people follow the Guidelines?

#### 3. Describe characteristics of individuals who may have special nutritional needs. (C-1, C-2)

a. Access MyPyramid at [www.MyPyramid.gov](http://www.MyPyramid.gov) to calculate needs for various groups such as Young Children, Vegetarians, or for Older Adults. Compare similarities and differences. Create a Venn diagram to illustrate your comparisons.

### Questions for Discussion/Formative Assessment
- Why do these guidelines not apply to children younger than 2 years old?
- What recommendations would apply for these infants and young children?

b. Use the Internet or classroom resources to learn more about vegetarian diets, vegan diet needs, and macrobiotic diets. Complete Activity Sheet #3: Thinking It Over in this unit to summarize your thoughts. Internet sources could include the American Dietetic Association at [http://www.eatright.org](http://www.eatright.org) or the Vegetarian Resource Group at [http://www.vrg.org](http://www.vrg.org)

c. Use the Guided Reading Activity Sheet #4: Pregnant Women Have Special Dietary Needs, to examine the additional nutritional needs of pregnant women compared to women in the same age range who are not pregnant.

d. Divide into groups of 5 students with the same role to play. Use the Webquest Activity Sheet #5: Sports Nutrition in the Media to investigate sports nutrition issues that are relevant for student athletes. Allow time for the groups to share their research. Regroup so that the new groups include one member from each role. Create and videotape a 5-minute television interview that summarizes the information learned about sports nutrition.

#### 4. Propose meal plans for individuals with special nutritional needs. (Competencies C-1, C-2)

a. Women need about 300 additional calories each day during the second and third trimesters of their pregnancy. Find a reference chart in your textbook or on the Internet that lists the nutritive value of foods. (USDA, Home and
Assess Nutrition and Wellness

Garden Bulletin Number 72, Nutritive Value of Foods at [www.nal.usda.gov/fnic/foodcomp/data/HG72/hg72_2002.pdf](http://www.nal.usda.gov/fnic/foodcomp/data/HG72/hg72_2002.pdf) is one resource.) Suggest healthful choices of foods to add to a regular balanced meal plan that will total about 300 calories per day for a week. Select a variety of nutrient dense foods.

b. Children are often selective in the foods they will eat. It can be difficult to ensure that some children eat a variety of foods, especially fruits and vegetables. Create a 7-day menu of healthful snacks that parents can use to ‘fill in the gaps’ during the day for a child who typically does not eat enough servings of these food groups.

c. Breakfast is essential for children to function well in school, grow and develop normally, and have enough energy to get through their day. Yet, many children do not eat breakfast. Develop a menu for one week of breakfast choices that an elementary school child could prepare. Follow the Recommended Dietary Allowances in choosing your foods.

d. Divide class into food labs to prepare one of the breakfast menus developed in Instructional Strategy 4(c) above. Adapt cooking and food preparation requirements to the skill level that a child age 7-10 could be expected to perform. For example, if the meal plan calls for a poached egg, students could prepare the poached egg in the microwave rather than using the stove-top. Discuss the nutritional needs and food preparation skill level that is appropriate for a child age 7-10 years.

e. Adapt the menu developed in Instructional Strategy 4(c) above for a child who prefers a vegan diet. Explain how your choices fit the vegan requirements.

f. Divide into groups to create a typical menu for a special meal such as a birthday or a holiday. Choose one diet modification or draw slips of paper with various modifications listed such as low sodium, low cholesterol, low fat, low sugar, increased fiber, or lactose intolerance. Modify the original menu and identify what ingredients might be substituted, what cooking methods might be altered, or other types of modifications recommended for the menu. This website from Penn State has useful information for modifying recipes: [http://nirc.cas.psu.edu/online.cfm?area=100](http://nirc.cas.psu.edu/online.cfm?area=100)

5. Compare nutritional needs of children, adolescents, adults, pregnant women, and the elderly. (Competencies C-2, C-3)

a. Use the Jigsaw learning strategy to explore the nutritional needs of various groups. Compare facts about each group to understand what needs they all share and what needs are unique. Try to establish at least 5 study groups. One group will focus on each segment such as the special nutritional needs of children, the special nutritional needs of adolescents, etc. You may want to add other study groups to focus on special needs of athletes or vegetarians. If your class is not large enough, use the jigsaw two times with different combinations of students in the groups.
Teacher Note: Jigsaw is a learning strategy that requires students to exchange information. The active process of teaching and learning together can be highly effective. This strategy works well when the material can be segmented or divided into chunks, and the order in which the material is learned does not matter.

Divide the class into study groups of 3-5 students. Assign each study group a segment or chunk to read, discuss, and learn. All students in the original study group should number off. A new study group is now formed with all students whose number is one, another group with all students whose number is two, etc.

All of the new groups will teach each other the one segment of the information that each learned in the original study group. Thus in the first study group the students focus on one chunk of information and in the second study group they teach each other their one chunk so that all students have an opportunity to hear about all of the information.

Here is a diagram showing how the groups would work in a class of 15 students:

```
6 6 6
v v v
n n n
4 4 4
m m m
```

Divide into 5 study groups with 3 students in each group to focus on one chunk of information. This allows for 5 chunks of information to be discussed:

```
6 v n 4 m
6 6 v v n n 4 4 m m
```

Number each student in the groups above 1, 2, 3. All students with #1 divide into a new group, etc. to teach each other what they learned:

```
6 v n
v n 6 m 4 6
4 m n 4 m v
```

b. Create a cafeteria bulletin board featuring nutrition guidelines for groups who may have special nutritional needs. Divide into groups to research and prepare parts of the overall bulletin board. Special populations might include pregnant women, infants and young children, older adults, athletes, people with food allergies, or those who are lactose intolerant.

c. Invite a local dietitian as a special class speaker. A dietitian for patients in a nursing home might talk about special needs of the elderly. A dietitian or personal trainer may be able to focus on special needs of athletes. A dietitian or physician may talk about special needs of pregnant women and infants.
Another alternative is to invite a panel of professionals to discuss all of these special populations.

**Summative Assessments**

**Paper and Pencil**

1. Use Assessment #1: *Menu Scramble* to create one daily meal plan. The meal plan must use the recommendations from MyPyramid. (Competency C-1)

2. Create a brochure for parents of preschoolers. The brochure should include nutrition advice regarding nutrient needs, food groups and serving sizes appropriate for young children. The brochure should include recipes and a meal plan for one full day. (Competencies C-1, C-3)

3. Write a research report describing a medical condition and recommendations for a modified diet. Your report should include a description of the medical condition, how diet relates to the condition, and what types of diet changes would a health professional recommend. Examples for topics might include diabetes, cancer, lactose intolerance, hypertension, or heart disease. (Competency C-2)

**Classroom Experiences**

1. Work in groups to develop the perfect pizza recipe. Many traditional pizza recipes are high in fat and calories compared to nutrient density. Create a recipe for a pizza that is lower in total fat and yet is nutrient dense. Prepare the pizza in your food lab and share with other groups. Use teacher evaluation and peer assessment to determine the nutritive value and appeal of each pizza recipe. Use Assessment Sheet #2: *Pizza Lab* for teacher evaluation component. (Competency C-1)

2. Invite a panel of professionals from the community to evaluate the videotaped television interviews in Instructional Strategy 3(e). Include one or more personal trainers, dietitians, and coaches. (Competency C-2)

3. Recommend a pasta dish suitable to be served as a main dish for a toddler. This dish should provide at least 40% of the toddler’s daily protein requirement. You may search for an existing recipe or develop one of your own. (Competencies C-1, C-3)

4. Research the special nutritional needs of the elderly. Create a poster display for your local senior center to educate senior citizens about their special nutrition needs. Your poster should be informative, attractive, and focus on one important fact regarding nutritional needs of the elderly. Be sure to list specific actions needed and provide reliable sources to contact for additional information on your topic. (Competencies C-1, C-3)

5. Develop an omelet recipe for someone who is trying to reduce cholesterol and sodium intake. (Competencies C-1, C-2)

6. Divide into groups of 5 students. Use Assessment #3: *Making Headline News* to develop a one-minute television news feature related to good nutrition. (Competencies C-1, C-3)
Application to Real Life

1. Help a local Meals on Wheels volunteer make deliveries for one day. Interview the people who receive these meals to learn more about how and why this nonprofit organization benefits people in your community. Organize an FCCLA fund-raising activity in your community to benefit the Meals on Wheels organization. (Competency C-3)

2. Work with student athletes in your school to develop weekly menus for their physical training needs. Take into account when the athletes practice, the types of physical activity they are involved in, individual food likes and dislikes, and develop menus that meet the recommendations of MyPyramid. (Competency C-2)

3. Visit a local pharmacy, health foods store, or Internet online sources to look for various food supplements. Read the labels to determine the type of information the manufacturer claims about the products. Does the manufacturer make: (1) a health claim about the dietary supplement reducing the risk for a disease or illness; (2) a claim regarding the nutrient content; or (3) a structure/function claim about the product. Write down the claims the manufacturer makes on the label, then research the dietary supplement using non-biased sources to determine if those claims can be supported by fact. Write a 2-3 paragraph summary of your findings. (Competency C-2)
Fact Sheet #1

Tips for Healthy Eating

1. Don't skip meals - plan for meals and snacks.
   Believe it or not, 3 meals and 2 snacks are best to maintain both energy levels and healthy weight. You are more likely to overeat or choose nutrition-poor foods when you skip meals and are over-hungry. Eating away from home? Don't leave yourself stranded—take foods with you or know where you can go to buy something healthy and satisfying.

2. Learn about simple, healthy ways to prepare foods.
   Think about baking, boiling, grilling, stir-frying, or microwaving as healthy ways to cook foods instead of deep frying your foods. Try dried herbs (basil, oregano, parsley) and spices (lemon pepper, chili powder, and garlic powder) to spice up your food, instead of adding toppings like butter, margarine, or gravy. Try trimming off the skin and fat on your meat: you'll still get plenty of flavor and it's more nutritious and heart-healthy!

3. Sugar is "empty energy" - avoid getting too much.
   Sugary drinks are a big source of empty energy. This means that they contain a lot of energy (in the form of calories) that your body may not need and they don't have vitamins, minerals, protein, or even fiber. Try sugar-free sodas, sugar-free drink mixes, and water instead of regular drinks or juice. Even "natural" unsweetened juices contain a lot of energy you may not need. Don't go overboard—2 small glasses a day of regular soda or juice is fine. Lots of sugar is also found in desserts like cakes, cookies and candies. Make a place for these foods once in a while, but don't give up nutrition-rich foods to do it.

4. Pay attention to your eating and your body.
   Slow down when you eat. Try to relax and pace yourself so that your meals last at least 20 minutes, since it takes 20 minutes for you to feel full. Listen to your body. Eating when you are hungry and stopping when you are full will help your body to balance its energy needs and stay comfortable. Ask yourself: Am I eating because I'm hungry, or because I'm stressed or bored? Try warm foods (soup, hot cereal, cocoa) and high-fiber foods (whole grains, vegetables, beans) to increase your feeling of comfortable fullness.

5. Stay healthy and happy—avoid "diet thinking."
   There are no good foods or bad foods. All foods can be part of healthy eating, in moderation. You do not need to buy fat-free or dietetic foods. Fat-free or dietetic foods are not necessarily lower in calories -they usually have lots of added sugar to replace the fat! YOU are more important than your weight or body size—believe it! And your health and happiness can be hurt by drastic weight loss plans. If you have not yet reached your adult height, too much weight loss could interfere with your growth, even if you are overweight. For younger teens that are overweight but still growing, it may be important to keep your weight steady as you continue to grow, instead of focusing on weight loss. If you feel you are overweight and want to make some changes in your food intake, it's a good idea to contact your health care provider. You may also want to ask your health care provider for a referral to see a nutritionist (a person who has studied nutrition, and knows all about food and healthy ways to lose weight).

Written by Heather Bell, MPH, RD, CHES.
Is Everyone on a Diet?

Work in groups of 3-5 students to discuss your thoughts about the definition of a diet. Select one person from your group to be the leader and one person to be the recorder. The leader is responsible for keeping the group on task, while the recorder is responsible for writing down the main ideas and responses to the following questions. Once your group finishes its discussion you will share your ideas with the class.

1. What is a diet? Is it something you do or something you eat?
2. Is it true that everyone is ‘on a diet?’ Explain your answer.
3. What does it mean to “watch what you eat?”
4. How would you describe a good diet?
5. Are there foods that are ‘bad’ for you? Why?
6. Can a ‘good food’ be bad for your diet? Explain.
7. How can a person know if their diet is healthy? What are some signs to look for that signal a good diet or a poor diet?
8. What advice would you give a teen about a healthy diet?
9. Who might you contact for more information if you have questions about choosing a healthy diet? Who would be a knowledgeable source?
10. Do you think a person who knows a lot about nutrition has a healthy diet?
Search for the Perfect Food

Did you know that Americans are rumored to eat 18 acres of pizza on average every day! Now that’s a lot of pepperoni! In all its cheesy splendor, pizza might seem like the perfect food – but with all that fat and cholesterol, it’s not the healthiest treat around. So what is the perfect food? That’s for you to discover.

Your mission: Use the Internet and the websites below to gather information about food sources for good nutrition and overall health. Then make a recommendation for the one “perfect food” – something that is both nutritious and delicious. Then create an advertisement to convince your classmates that your recommendation is indeed the perfect food. Be sure to explain why that food is nutritious, how it contributes to your body’s nutritional needs, and why you think it is a good food choice.

Begin your quest using the links below. Feel free to also consult books, magazines, and other library resources as you research information on the “perfect food.”

**How to Understand the Nutrition Facts Panel on Food Labels**
Start here to discover what information you have easily at your fingertips every time you shop for foods.
- [http://www.cfsan.fda.gov/~dms/foodlab.html](http://www.cfsan.fda.gov/~dms/foodlab.html)
- [http://kidshealth.org/teen/food_fitness/nutrition/food_labels.html](http://kidshealth.org/teen/food_fitness/nutrition/food_labels.html)

**Got Milk?**
Learn more about 3-A-Day for better health, and the connection between cows and strong bones.
- [http://www.got-milk.com](http://www.got-milk.com)

**I Love Cheese**
You may love it, but it is really good for you. What is all the chatter about cheese? Ya gotta try ricotta, nothin’s better than cheddar, take home provolone, then there’s cottage, cream, and string.
- [http://www.ilovecheese.com](http://www.ilovecheese.com)

**The American Egg Board**
Yes it’s edible, but what is so incredible about the egg? Is an egg a day really okay? Be prepared to burst into song at this website.
- [http://www.aeb.org](http://www.aeb.org)

**National Chicken Council & US Poultry and Egg Association**
Not sure whether the chicken or the egg is the best choice? Try this website for important facts to help you decide.
Assess Nutrition and Wellness

WebQuest
Activity Sheet #2 Continued

Pork the Other White Meat
What are the benefits of the other white meat compared to the ‘real’ white meat? Go whole hog and find out the nutrition facts, food safety tips, and chef’s recommendations.
http://www.otherwhitemeat.com/

Beef Council and Cattlemen’s Association
Beef may be what’s for dinner; but should it be? Check out these facts to help you narrow your list of choices for the perfect food.
http://www.beef.org

Personal Health Zone
Compare nutrient facts for a variety of meat and poultry sources
http://www.personalhealthzone.com/nutrition/nutrients/meat_poultry/meat_poultry.html

Essential Fruits and Vegetables
Find out if these are the perfect choice. Examine the nutritional content of fruits and vegetables. Dole recommends 5-A-Day, what do you say? Discover how color contributes to health. Try the link for ‘parents’ to find the most grown-up facts.
http://www.dole5aday.com
http://www.health.state.mo.us/5aday/

Wheat Foods Council
For a few grains of truth about good nutrition, and the stamina to finish your search for the perfect food see what the Wheat Foods Council has to say about this important staple.
http://www.wheatfoods.org/

Adapted and updated from Nutrition: A Quest for the Perfect Food a lesson plan at DiscoverySchool.com
The Facts Say …
List 3 possible health benefits with a vegetarian diet.
1. 
2. 
3. 

List 3 possible health benefits with a diet containing meat.
1. 
2. 
3. 

List 3 possible health consequences with a vegetarian diet.
1. 
2. 
3. 

List 3 possible health consequences with a diet containing meat.
1. 
2. 
3. 

After Thinking It Over, I Say …
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
Pregnant Women Have Special Dietary Needs

Access the National Women’s Health Information Center website, 4 Woman.Gov, at: www.4woman.gov/faq/preg-nutr.htm/ Use the information from this website to find the answers to the following questions.

1. Eating too many foods that are high in fat during pregnancy leads to ____________________________
__________________________________________________________________________________.

2. According to the American Dietetic Association, pregnant women should increase their usual servings of a variety of foods from the following basic food groups ____________________________________
_________________________________________________________________________________.

3. The three nutrients needed for a healthy pregnancy include ________________________________
__________________________________________________________________________________.

4. Recent research shows that women who gain more than the recommended amount during pregnancy and who fail to lose this weight within six months after giving birth are at much higher risk of being obese nearly _____ years later.

5. Total weight gained during pregnancy includes _____ to _____ pounds for the weight of the baby. The remaining weight consists of a higher fluid volume, larger breasts, larger uterus, amniotic fluid, and the placenta.

6. During pregnancy when is it safe to drink alcohol? ________________________________.

7. ________________________________ is a group of birth defects caused by drinking alcohol during pregnancy.

8. What do some studies suggest regarding caffeine intake during pregnancy? ________________
__________________________________________________________________________________.

9. ________________________________ is a form of diabetes that begins during pregnancy and usually goes away after the birth of the baby.

10. Morning sickness and nausea are common problems for pregnant women. List one suggestion to help reduce nausea. ___________________________________________
Pregnant Women Have Special Dietary Needs

Access the National Women’s Health Information Center website, 4 Woman.Gov, at: www.4woman.gov/faq/preg-nutr.htm/ Use the information from this website to find the answers to the following questions.

1. Eating too many foods that are high in fat during pregnancy leads to 
   too much weight gain without meeting increased needs for nutrients.

2. According to the American Dietetic Association, pregnant women should increase their usual servings of a variety of foods from the following basic food groups
   fruits and vegetables; whole grains, breads and cereals; dairy products and proteins.

3. The three nutrients needed for a healthy pregnancy include
   1. Folic acid   2. Iron   3. Water

4. Recent research shows that women who gain more than the recommended amount during pregnancy and who fail to lose this weight within six months after giving birth are at much higher risk of being obese nearly __10__ years later.

5. Total weight gained during pregnancy includes _6_ to _8_ pounds for the weight of the baby. The remaining weight consists of a higher fluid volume, larger breasts, larger uterus, amniotic fluid, and the placenta.

6. During pregnancy when is it safe to drink alcohol? It is never safe during pregnancy.

7. Fetal Alcohol Syndrome is a group of birth defects caused by drinking alcohol during pregnancy.

8. What do some studies suggest regarding caffeine intake during pregnancy? That caffeine can harm the fetus.

9. Gestational diabetes is a form of diabetes that begins during pregnancy and usually goes away after the birth of the baby.

10. Morning sickness and nausea are common problems for pregnant women. List one suggestion to help reduce nausea. Eat 6-8 smaller meals each day rather than 3 larger ones; avoid being without food for a long period of time; drink fluids between, but not with meals; avoid greasy foods; avoid foods with strong odors; or rest when you are tired.
Sports Nutrition in the Media

Choose one role below to research facts and issues related to sports nutrition. Use the Internet websites provided for the role you selected to learn more about the topic from that perspective. You may use other sources of information for your research as well.

Once you have gathered all of the information you need, get together with others in your group who have the same role. Compare your notes and develop one fact sheet that summarizes the information your group feels is most important about sports nutrition.

ABC Sports is interviewing athletes, personal trainers, coaches and dietitians for a television feature on sports nutrition. The show will attempt to expose misinformation about sports nutrition and will focus on facts and recent research to help young athletes avoid the dangers that can result from poor eating habits.

Roles:
1. TV Reporter
2. Personal Trainer
3. Athlete
4. Coach
5. Dietitian

**tv reporter**
Centers for Disease Control
Mayo Clinic
http://www.mayoclinic.com/invoke.cfm?objectid=2F776F30-10D2-49FC-BA32D2D61AD736E1
American College of Sports Medicine

**personal trainer**
American Council on Exercise
http://www.acefitness.org/fitfacts/fitfacts_list.cfm#12
The President's Council on Physical Fitness and Sports
http://www.fitness.gov/fastfacts.htm#top
http://www.fitness.gov/faq.html
Colorado State University Extension
http://www.ext.colostate.edu/pubs/foodnut/09362.pdf
Cleveland Clinic
http://www.clevelandclinic.org/health/health-info/docs/1800/1842.asp?index=8184
athlete
http://www.urbanext.uiuc.edu/hsnut/


Boston Hospital website with healthy eating tips.
http://www.youngwomenshealth.org/nutrition-sports.html#nutrition

Nemours Foundation provides information for the student athlete
http://www.kidshealth.org/teen/food_fitness/sports/eatnrun.html

The President’s Council on Physical Fitness and Sports
http://www.fitness.gov/10tips.htm

couch
National Health Information Center, U.S. Department of Health & Human Services

Nemours Foundation provides information on the nutritional needs of young athletes
http://kidshealth.org/parent/nutrition_fit/fitness/feed_child_athlete.html

MomsTeam Youth Sport Parenting Information
http://www.momsteam.com/alpha/features/nutrition/

Gatorade Sports Science Institute
http://www.gssiweb.com/

University of Oregon Sports Nutrition
http://darkwing.uoregon.edu/~soar/nutrition/top10.htm

dietitian
American Dietetic Association
http://www.eatright.org/Public/Other/index_adap1200.cfm
http://www.eatright.org/Public/index_16503.cfm
http://www.eatright.org/Public/Media/PublicMedia_10758.cfm

Cleveland Clinic
http://www.clevelandclinic.org/health/health-info/docs/1900/1900.asp?index=8423

Mayo Clinic
http://www.mayoclinic.com/findinformation/conditioncenters/centers.cfm?objectid=000BDE1A-6219-1B37-8D7E80C8D77A0000

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On with the Show

Divide into new groups with one member from each role. Each group should have one reporter, one personal trainer, one athlete, one coach, and one dietitian. The reporter from each group will interview the other group members for the ABC Sports television show. The show should be about 5-minutes in length. Every member of the group should contribute to the interview. The reporter can decide the theme or focus of the interview questions, but the overall show should focus on teen athletes and nutrition. Video tape each team individually, then allow time for the whole class to watch the shows.
Menu Scramble

Imagine that your kitchen includes all of the foods on the list below in addition to staples such as sugar, flour, salt or margarine. Plan a one-day menu for yourself based on the recommendations from MyPyramid.

### Breakfast

<table>
<thead>
<tr>
<th>Food List</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1 cup fresh strawberries</td>
<td></td>
</tr>
<tr>
<td>1 med. head lettuce</td>
<td></td>
</tr>
<tr>
<td>8 oz orange juice concentrate</td>
<td></td>
</tr>
<tr>
<td>1 can refrigerated biscuits</td>
<td></td>
</tr>
</tbody>
</table>

### Midmorning Snack

<table>
<thead>
<tr>
<th>Food List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 oz. tomato sauce</td>
<td></td>
</tr>
<tr>
<td>1 gal. 2% milk</td>
<td></td>
</tr>
<tr>
<td>1 doz. eggs</td>
<td></td>
</tr>
<tr>
<td>16 oz. can applesauce</td>
<td></td>
</tr>
<tr>
<td>16 oz. grated cheddar cheese</td>
<td></td>
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</tbody>
</table>

### Lunch

<table>
<thead>
<tr>
<th>Food List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 lb. fresh hamburger</td>
<td></td>
</tr>
<tr>
<td>3 cups dry rice</td>
<td></td>
</tr>
<tr>
<td>16 oz. dry spaghetti noodles</td>
<td></td>
</tr>
<tr>
<td>1 loaf bread</td>
<td></td>
</tr>
<tr>
<td>10 oz. frozen corn</td>
<td></td>
</tr>
</tbody>
</table>

### Afternoon Snack

<table>
<thead>
<tr>
<th>Food List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 box graham crackers</td>
<td></td>
</tr>
<tr>
<td>10 oz. frozen green beans</td>
<td></td>
</tr>
<tr>
<td>16 oz. jar peanut butter</td>
<td></td>
</tr>
<tr>
<td>1 pkg. ramen noodles</td>
<td></td>
</tr>
<tr>
<td>1 can tuna</td>
<td></td>
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</tbody>
</table>

### Dinner

<table>
<thead>
<tr>
<th>Food List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 box cereal</td>
<td></td>
</tr>
<tr>
<td>32 oz. bag frozen French fries</td>
<td></td>
</tr>
<tr>
<td>1 bottle Ranch dressing</td>
<td></td>
</tr>
<tr>
<td>1 bottle Italian dressing</td>
<td></td>
</tr>
<tr>
<td>1 lb. apples</td>
<td></td>
</tr>
<tr>
<td>8 oz. jar grape jelly</td>
<td></td>
</tr>
<tr>
<td>8 oz. shelled pecans</td>
<td></td>
</tr>
<tr>
<td>16 box raisins</td>
<td></td>
</tr>
</tbody>
</table>
Assess Nutrition and Wellness

Competency C-1
Assessment #2

Name ____________________________

The Perfect Pizza Lab Planning Sheet

Period ______________ Recipe _____________________________ Date of Lab __________

Recipe Ingredients

Instructions for Preparation

Estimate Preparation Time ________________ Amount of Cooking Time ________________

List the nutritive values per serving for
  total fat ____________ cholesterol ______________
  sodium ____________ carbohydrates ____________
  protein ____________ calories ________________
  serving size ____________

Page 1 of 2
The Perfect Pizza Lab Evaluation Sheet

Lab Team Duties:

Chef: Read the recipe; Fill out lab sheet; Main cook for the recipe; Clean Range; Supervise other cleaning jobs.

Cook: Assemble equipment; Assist Chef; Clean the table; Wipe the counters and walls; Put laundry in basket; Check clean-up.

Assistant Cook: Preheat oven; Get supplies for the recipe; Wash dishes; Clean the sink; Wipe off table.

Manager: Dry dishes and put away; Sweep floor; Assist others as needed;

Evaluation

Lab Sheet: Completed neatly, correctly and turned in on time. _________

Group Work: Completed tasks, managed time, followed directions, everyone contributed and cooperated during the lab. _________

Lab Management: Equipment used correctly; supplies returned to storage areas, lab area was clean and neat _________

Product Evaluation: Recipe was prepared according to the instructions using appropriate lab techniques. The pizza was prepared following the instructions, it was nicely browned and attractive. _________

Nutritive Values: The nutritive values were calculated correctly and the overall pizza was lower in fat and more nutrient dense than average frozen types. _________

Total Points _________
Making Headline News

Divide into groups of 5 students to brainstorm answers to the following questions. Develop a one-minute ‘segment’ for tonight’s local news report. Provide facts, information, interview local ‘experts’ and provide recommendations for actions your community should take.

**WHO**
- ...needs to know more about eating right? being fit? making healthy choices?
- ...among local young people sets a good example of healthy lifestyle choices?
- ...can help young people make positive choices?

**WHAT**
- ...are the facts and myths about eating right, being fit, and making healthy choices?
- ...are the “secrets” to making healthy lifestyle choices?
- ...are the costs and consequences of diet and fitness fads?
- ...messages do young people hear about eating right, being fit, and making lifestyle choices?
- ...challenges lead young people to make risky health choices?

**WHERE**
- ...can young people obtain financial information about eating right, being fit, and making healthy choices?
- ...are young people most likely to make risky health choices?
- ...do young people eat and exercise?

**WHEN**
- ...do young people’s eating and fitness habits start to affect their health? How long do the effects last?
- ...do nutrition and fitness needs change across the life cycle?
- ...is there time to eat right and be fit?
- ...are young people most likely to make risky health choices?

**WHY**
- ...should young people care about eating right, being fit, and making healthy choices?
- ...do young people’s healthy lifestyle choices matter?
- ...are some young people better able than others to deal with stress and resist risky health choices?
Unit 2
Balancing Food and Fitness

Practical Problem:
How do I balance my body’s needs for food and fitness to ensure good health throughout my life?

Missouri Family and Consumer Sciences Competencies:
(C-4) Describe nutrition related health risks.
(C-5) Assess the effects of eating disorders, and food and diet fads on wellness.
(C-6) Assess the role of physical activity on wellness.

Enabling Objectives for Competency Mastery:
1. Analyze current lifestyle habits that may increase health risks.
2. Examine the impact of anorexia nervosa, bulimia, binge-eating and overeating on wellness.
3. Compare current fad diets with the recommendations of the Dietary Guidelines for Americans.
4. Evaluate current health status.
5. Determine short- and long-term wellness goals.

Teacher Background Information

Rationale

Choices students make today will influence their overall health in the future. Fad diets, poor nutrition, lack of physical activity, or eating disorders students suffer from today will have a dramatic impact in the years to come. Nutrition research, fitness studies, and medical research all indicate that a balance between food and fitness is essential for a lifetime of good health. Many of the leading causes of death in the United States are directly linked to a sedentary lifestyle.

Nutrition-related Health Risks

There are two common types of diseases that affect human health. They are infectious disease and degenerative disease. Infectious disease includes small pox, influenza, or polio. Many infectious diseases are so debilitating that if they are not fatal, they severely reduce the quality of life and longevity of those afflicted. Modern vaccines and antibiotics have greatly reduced the threat of these types of disease in developed countries. Diet cannot prevent or cure infectious disease, but a healthful diet can improve the body’s ability to fight or defend itself against these diseases.
Degenerative diseases find their victims through a combination of three factors: genetics, individual medical history, and lifestyle. A few common examples of degenerative diseases include heart disease, diabetes, cancer, or Alzheimer’s.

While the exact cause of an infectious disease is known, the exact cause of many degenerative diseases is not known for certain. Scientist have identified many ‘risk factors’ that can increase the likelihood a person will develop a certain degenerative disease. For example, cigarette smoking is known to increase a person’s chances of developing lung cancer. However, a person who does not smoke may also develop lung cancer.

The National Center for Health Statistics reported in 2001, several of the leading causes of death in the United States. By far the greatest cause of death was heart disease, the second leading cause was cancer, and the third leading cause was stroke. All three are related to diet and physical activity. To further illustrate these statistics, approximately 270 people per 100,000 died in 1999 from heart disease, while fewer than 40 people per 100,000 died in motor vehicle and other accidents.

In addition to the degenerative diseases of heart disease, cancer, and Alzheimer’s already mentioned, other common diseases include diabetes, kidney disease, liver disease and cirrhosis, osteoporosis, anemia, and gastrointestinal conditions (i.e., gastric reflux, diverticulosis, irritable bowel syndrome, and ulcer).

The U.S. National Library of Medicine and the National Institutes of Health provide a great deal of information about diet and disease at www.nlm.nih.gov/medlineplus/ency/article/002096.htm#information/

Eating Disorders

Eating disorders are unhealthy behaviors that can lead to serious illness and even death. Someone who is suffering from an eating disorder may be ashamed of their actions and well aware that what they are doing is unhealthy, yet may not know how to change their behavior or seek help.

Common types of eating disorders include Anorexia Nervosa, Bulimia Nervosa, and Binge Eating. The causes or underlying issues are different for every eating disordered person. It is often a traumatic event that has happened in their life, possibly years before the eating disorder manifested. These are only some of the possible causes and will vary from person to person.

- Sexual abuse or rape
- Physical violence
- Emotional abuse (e.g., bullying)
- Divorce of parents
- Death of a loved one
- Serious illness in the family
- Peer pressure (e.g., to be thin)
- Surgery/ill health as a child
- Traumatic life-threatening event (e.g., car crash)
Anorexia Nervosa

Anorexia nervosa is an eating disorder in which the sufferer has a fear of weight gain and becoming "fat." However, like all eating disorders, anorexia is merely a symptom that can be observed for a much deeper psychological problem. Eating disorders, particularly anorexia and bulimia, usually affect females but the number of male anorectics is on the increase.

Those suffering from anorexia will often go to extreme lengths to avoid consuming food. One of the most frequent behaviors is lying. For example, saying they have already eaten dinner when really they haven't. Anorectics will also make excuses so they can eat less or even avoid meals altogether. This isn't necessarily the same as lying because they may decide to become vegetarian or vegan, have to fast for religious reasons, or they may simply claim they are on a "diet".

There is no predetermined cause of anorexia and the reasons for its onset will vary from person to person. Often, there are a number of contributory factors, many of which may be from the sufferer's past. One thing which all anorectics have in common is low self-esteem, even if it only manifests itself occasionally. Low self-esteem can quickly lead to a negative image of oneself, especially a distorted body image. Right from the start, anorexia is a way of coping and a way of dealing with problems when a person's life feels out of control.

Control is an important issue for someone who suffers from anorexia. The sufferer may feel as though their life is, or has been, out of control. The extent of the "control factor" varies from person to person.

Sufferers of all types of eating disorders tend to feel like their life is uncontrolled and chaotic, but the method of attempting to regain control varies according to the illness the person is suffering from. Anorectics try to regain control by denying themselves food, whereas bulimics purge their body of food in order to reestablish some control, even if only for a temporary period of time.

Bulimia Nervosa

Bulimia is a condition where the sufferer purges (gets rid of) food they have eaten by self-induced vomiting, over exercising, abusing laxatives or diuretics, or other means. Binges are common with bulimia, although the frequency varies from person to person. Many bulimics do not binge but simply purge ordinary meals or snacks. Like anorexia, bulimia has nothing to do with weight, calories or being "thin" - these are merely symptoms of underlying turmoil and distress.

It is much harder to identify someone who is suffering from bulimia than anorexia because the physical signs are less obvious and can take longer to appear. Also, most bulimics are not underweight and many may be overweight due to binging. Bulimia is a constant battle for control. If the control is lost (i.e. by eating or overeating) then it must be regained through vomiting, over exercising, laxative abuse or other methods of purging.
Binge-eating

There is no predetermined cause of binge-eating disorder and the reasons for its onset will vary from person to person. Binge-eating disorder (overeating) is characterized by periods of uncontrollable eating followed by feelings of shame and guilt. These binges are not usually accompanied by purging, although occasional purging may occur. People who suffer from binge-eating disorder are usually overweight and obesity can be a very real problem. Binge-eaters tend to consume food in order to cope with stress.

In a similar way to bulimics, binge-eating disorder sufferers eat excessively in order to cope with life (except they do not usually purge) and then feel very much out of control afterwards. Binge-eating is a psychological disorder and binges/weight gain are merely symptoms of underlying issues. Like bulimics, people with binge-eating disorder do recognize that there is something wrong, they often fear someone will discover their eating behavior. They usually know their behavior is unhealthy, but they don’t know how to seek help.

Fad Diets

Many people become frustrated by attempts to lose weight through increasing physical activity and lowering overall caloric intake. They may seek more rapid results by resorting to a variety of fad diets that promise amazing, guaranteed, effortless results.

Fad diets tend to be popular for a short time and then are replaced by the next fad. Many fad diets bring successful weight loss results, however, these results can come with a long-term health consequence. The fad does not help a person establish long-term healthful eating patterns. Most people regain the weight once they stop following the diet plan. The ‘seesaw’ effect can be even more dangerous to long-term health.

Fad diets may be unhealthy because they often limit certain food groups or strictly limit total calories. Diets that provide less than 800 calories per day could lead to heart problems, which can be fatal. Losing weight at a very rapid rate (more than 3 pounds a week after the first couple weeks) may increase the risk for developing gallstones (clusters of solid material in the gallbladder that can be painful).

Research suggests that losing 1/2 to 2 pounds per week by making healthy food choices, eating moderate portions, and including physical activity every day is the best way to lose weight and keep it off. Healthy eating and physical activity habits may lower the risk for developing type 2 diabetes, heart disease, and high blood pressure.

Web Resources for Teachers

www.consumer.gov/weightloss/bmi.htm
The Partnership for Healthy Weight Management provides a BMI calculator and information about healthy weight management strategies.

http://www.shapeup.org/
A non-profit organization dedicated to achieving healthy weight for life. Website includes an interactive body fat calculator.
http://outreach.missouri.edu/ges/infosheets/diseaseinfo.htm
The University of Missouri Extension Information Sheets on Cancer, Diabetes, Heart Disease, Hypertension, Osteoporosis, Phytochemicals and Powerpoint slideshows.

http://www.niddk.nih.gov/
National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health.

www.nhlbisupport.com/bmi/bmicalc.htm
The National Heart, Lung and Blood Institute includes a Body Mass Index calculator and a menu planner online. The home page includes many informative articles and a weight management tutorial.

www.palerelections.com
Pale Reflections is an online source for facts, statistics, and articles related to eating disorders. Topics include anorexia, bulimia, binge eating, depression, obsessive compulsive disorder and similar topics.

http://www.4woman.gov/faq/preg-nutr.htm
4woman.gov is a national women’s health information center and is supported by the U.S. Department of Health and Human Services, Office on Women’s Health.

http://www.netwellness.org/
NetWellness is created and evaluated by the faculty at the University of Cincinnati, The Ohio State University, and Case Western Reserve University. This is a non-profit consumer health web site.

This website includes a number of links to additional information for those who believe they have an eating disorder and want to find help, for those who know someone suffering from an eating order, and for those who just want to learn more about this illness.

http://www.brightfuturues.org/nutrition/pdf/index.html
*Bright Futures in Practice: Nutrition* pdf file from Georgetown University. The mission of Bright Futures is to promote and improve the health and well-being of infants, children, adolescents, families, and communities.

**References**


Assess Nutrition and Wellness


**Instructional Strategies**

1. **Analyze current lifestyle habits that may increase health risks. (Competencies C-4, C-6)**

   a. Use Activity Sheet #1: **Information Search** to explore facts about various health risks. Divide the class into groups to work together on this activity. Hand out the Activity Sheet to each group. Allow time to use the textbook, library or Internet sources to search for the information. Review answers as a class and discuss questions that remain. Fill in with information about the diseases that are not selected by any group.

   b. Hand out copies of the policy statement from the American Academy of Pediatrics and Parents Advocating School Accountability regarding school soft drink sales. This can be found at the following link: [http://www.aapolicy.aappublications.org/cgi/content/fall/pediatrics;113/1/152](http://www.aapolicy.aappublications.org/cgi/content/fall/pediatrics;113/1/152)
   Work in groups of 3-4 students using Activity Sheet #2: **SEARCH for Solutions** to consider what should be done in your school.

   **Teacher Note:** A great lesson plan is available through the Public Broadcast System (PBS) featuring NOW with Bill Moyers. You will find a full lesson plan with handouts, transparencies, activities to show how much sugar is in soda, and links to background information on this issue. [http://www.pbs.org/now/classroom/diet.html](http://www.pbs.org/now/classroom/diet.html)

   c. Create an FCCLA Student Body project to learn more about healthy eating habits. Student Body is a national FCCLA peer education program that involves youth teaching youth about healthy eating, fitness, and lifestyle choices. The Student Body program focuses on three aspects of wellness: Eat Right; Be Fit; and Make Healthy Choices. Begin with the Eat Right component. Fill out Activity Sheet #3: **Student Body “Eat Right”** to determine each student’s interest. Students who marked the same areas of interest form groups to design a project to educate other students about healthy eating habits.
d. Use the Internet to access the Fast Food Facts website at http://www.foodfacts.info/ to determine how eating out at fast food restaurants contributes to their overall diet. Divide the class into two groups. Group One will assume they eat out every meal for five days and they can eat anything from any fast food restaurant. Group One should record their 5-day meal plan and use the website to determine how many total calories were consumed each day. Group Two will be limited to no more than 2,200 calories per day. Group Two can only eat at fast food restaurants and they cannot exceed their calorie limit. Group Two will write out their meal plan for five days. Post both meal plans for all students to examine.

Questions for Discussion/Formative Assessment

- How far over the 2,200 calorie limit was group one for each day?
- How much food was group two able to select and still stay within their calorie limit?
- Are either one of these approaches realistic for a long-term lifestyle?
- Besides total calories, what other nutritional concerns do you see with both meal plans?
- What long-range health concerns would you predict for someone who ate only fast food?
- Why do you think fast food is so popular in our society?
- What are some ideas for overcoming the fast food craze?

2. Examine the impact of anorexia nervosa, bulimia, binge-eating and overeating on wellness. (Competency C-5)

a. Estimate how many children and adults are concerned with weight and dieting by using Activity Sheet #4: Dieting Statistics in America. Use Fact Sheet #1: Statistics About Eating Disorders and their Precursors to compare the data with your estimates.

Questions for Discussion/Formative Assessment

- Do you think elementary school children should be concerned with dieting?
- What role do you think the media plays in influencing people’s opinions about weight?
- Do you believe there is a ‘perfect’ size or shape this is best for everyone to try to fit?
- Besides dieting, what can a person do to change their size or weight?
- How do you feel about these statistics?
- What can be done to educate your community about your concerns?

b. Divide the class into four Jigsaw learning groups described earlier in this unit. Group One will research and define various eating disorders such as anorexia nervosa, bulimia, binge eating, etc. Group Two will research and recommend ways for a friend to help someone who suffers from an eating disorder. Group Three will research and recommend ways for parents to help a child with an
eating disorder. Group Four will research and recommend ways for an individual who has an eating disorder to recognize the problem and seek help. After each group has prepared, divide into new groups to teach each other about eating disorders. Use textbooks, library materials or online sources for background research.

Teacher Note: One online source is the National Eating Disorders Association (NEDA). NEDA is dedicated to expanding public understanding of eating disorders and promoting access to quality treatment for those affected along with support for their families through education, advocacy and research. http://www.nationaleatingdisorders.org/

Other online resources that may help you with background or teaching materials for teen eating disorders is at http://www.lv.psu.edu/jkl1/teens/eating.html http://www.girlpower.gov/AdultsWhoCare/resources/Pubs/teachers.pdf

c. Use Activity Sheet #5: Understanding Eating Disorders Webquest to explore the illnesses and appropriate actions to help someone with a suspected eating disorder. Divide the class into four groups to complete the Webquest investigation. Assign each group one scenario to explore.

3. Compare current fad diets with the recommendations of the Dietary Guidelines for Americans. (Competency C-5)

a. Brainstorm a list of popular diet fads in the media now. Create a chart to compare and contrast each diet. Here is an online link that lists several fad diets currently in the media http://www.ezfastweightloss.com/

Questions for Discussion/Formative Assessment
- What do these diets have in common?
- What is unique about each diet?
- Is there a “celebrity” who endorses the diet or is the diet based on “scientific research?”

b. Review Fact Sheet #2: Characteristics of Fad Diets either with individual copies or by using an overhead transparency. Use the Internet or other media to find promotional materials for fad diets currently in the news. Select one fad diet to develop a poster with the fad diet “facts” and the real facts showing the accurate health information relevant to that fad diet.

4. Evaluate current health status. (Competency C-6)

a. Review Fact Sheet #3: Body Mass Index and Health. Calculate your BMI. Make a list of goals to maintain or improve your BMI. An online BMI calculator is available at: http://www.nhlbisupport.com/bmi/bmicalc.htm
b. Use Activity Sheet #6: **Calculate Your Basal Metabolic Rate** or the online calculator at [http://health.discovery.com/tools/calculators/basal/basal.html](http://health.discovery.com/tools/calculators/basal/basal.html) to determine the minimum number of calories you need each day.

c. Contact the Missouri Action for Healthy Kids state team (website contact information is provided below) to request brochures and information about the efforts in Missouri to improve the health of children and adolescents. Use the FCCLA Planning Process to determine how students in your school can get involved with educating your school and community.

**Teacher Note:** Action for Healthy Kids (AFHK) is a nationwide initiative dedicated to improving the health and educational performance of children through better nutrition and physical activity in schools. There are more than 40 partner organizations in AFHK including the American Association of Family and Consumer Sciences. Information about the program is available at [http://www.actionforhealthykids.org/](http://www.actionforhealthykids.org/)

The Missouri State Team operates in collaboration with the Missouri Coordinated School Health Coalition. The Team developed a brochure for parents and families called “Missouri Families, Eating Better and Moving More”. Brochures have been printed and will be distributed through the Practical Parenting Partnerships’ Newsletter, the PTA’s newsletter and to school boards, the Girl Scouts, and the Boy Scouts. More information on Missouri state data and AFHK activities is available at [http://www.actionforhealthykids.org/devel/state_profile.php?state=MO](http://www.actionforhealthykids.org/devel/state_profile.php?state=MO)

5. **Determine short- and long-term wellness goals. (Competencies C-5, C-6)**

   a. Use Activity Sheet #7: **Setting My Goals for a Healthy Weight** to make a plan for a healthy future.

   b. Use Activity Sheet #8: **Keeping Track of My Progress** to monitor your progress toward healthier habits.

   c. Access the Missouri Action for Healthy Kids state profile at [http://www.actionforhealthykids.org/devel/state_profile.php?state=MO](http://www.actionforhealthykids.org/devel/state_profile.php?state=MO). View the online report or print out a copy to use in class. The report provides current data on health behaviors and risks for Missouri students. Discuss the questions below to determine what can be done in your school and community.
d. Access the Fit-4-Life website provided by the Centers for Disease Control at [http://www.bam.gov/sub_physicalactivity/index.html](http://www.bam.gov/sub_physicalactivity/index.html). This online resource includes a quiz to learn more about types of physical activities. It also includes a calendar creator to design a personal fitness and activity schedule.

e. Access the International Food Information Council’s website for information on reducing fat in the diet at [http://ific.org/publications/brochures/benbalbroch.cfm](http://ific.org/publications/brochures/benbalbroch.cfm). Discuss the definitions of low-fat, reduced fat, light, etc. Bring in various Nutrition Fact labels from products you regularly consume. Compare the amount of fat listed on “regular” products and on the similar product that claims to have less fat.

f. Identify a favorite food or recipe that is traditionally higher in fat such as banana bread or clam chowder. Discuss what ingredients in that food contribute to its high fat content. Suggest ingredient substitutions to lower the fat in that food item, for example, substituting applesauce for oil in muffins. Set up a blind taste test for regular and lower fat food items such as regular milk and skim milk; regular cheddar cheese and reduced fat; a regular cookie and the lower fat equivalent cookie; regular potato chips and the reduced fat version. Rate the foods before they know which item is regular and which is reduced fat. A comparison of fat-free vs. regular calorie foods is available online at: [http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/fat_free.htm](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/fat_free.htm)

### Summative Assessments

**Paper and Pencil**

1. Read Assessment #1: Just for the Health of It. Use the Just for the Health of It Check List to assess your learning regarding lifestyle habits and overall wellness. Develop an exercise plan, research a lifestyle health risk, make an oral presentation and a written report to demonstrate your learning. A Just for the Health of It Scoring Guide is included. (Competencies C-4, C-6)

2. Using the information from Instructional Strategy 1(b) related to soft drinks in schools, write a letter to the members of the School Board stating why vending machines that provide soda and candy should not be allowed in your school. Cite facts as well as your opinion in the letter. (Competency C-4)
3. Many popular recipes call for ingredients that are traditionally higher in fat. Review Assessment Sheet 2(a): **Ingredients to Lighten Up** to discover some suggestions for ingredient substitutions that will reduce the fat in the overall recipe. Apply that information to Assessment Sheet 2(b): **Recipes to Lighten Up** by identifying ingredients to substitute in each recipe. You may want to use ingredient substitutions and cooking method substitutions to lower the overall fat content for some of the recipes. (Competency C-4)

**Classroom Experiences**

1. Use Assessment Sheet #3: **Eating Disorders Scoring Guide** to evaluate the Eating Disorders Webquest Activity. Use credible sources to research eating disorders, make an oral presentation and use technology to create a presentation for this assessment. (Competency C-5)

**Application to Real Life**

1. Bring in recipes from home that your family enjoys. Review the recipes and indicate ingredient substitutions or cooking method substitutions to lower the overall fat content. (Competency C-4)
Fact Sheet #1

National Eating Disorders Association
Statistics:
Eating Disorders and their Precursors

The Prevalence of Eating Disorders
In the United States, as many as 10 million females and 1 million males are fighting a life and death battle with an eating disorder such as anorexia or bulimia. Approximately 25 million more are struggling with binge eating disorder (Crowther et al., 1992; Fairburn et al., 1993; Gordon, 1990; Hoek, 1995; Shisslak et al., 1995). Because of the secretiveness and shame associated with eating disorders, many cases are probably not reported. In addition, many individuals struggle with body dissatisfaction and sub-clinical disordered eating attitudes and behaviors. For example, it has been shown that 80% of American women are dissatisfied with their appearance (Smolak, 1996).

The Drive for Thinness
- 42% of 1st - 3rd grade girls want to be thinner (Collins, 1991).
- 81% of 10 year olds are afraid of being fat (Mellin et al., 1991).
- The average American woman is 5’4” tall and weighs 140 pounds. The average American model is 5’11” tall and weighs 117 pounds.
- Most fashion models are thinner than 98% of American women (Smolak, 1996).

Dieting
- 51% of 9 and 10 year-old girls feel better about themselves if they are on a diet (Mellin et al., 1991).
- 46% of 9-11 year-olds are “sometimes” or “very often” on diets, and 82% of their families are “sometimes” or “very often” on diets (Gustafson-Larson & Terry, 1992).
- 91% of women recently surveyed on a college campus had attempted to control their weight through dieting, 22% dieted “often” or “always” (Kurth et al., 1995).
- 95% of all dieters will regain their lost weight in 1-5 years (Grodstein, 1996).
- 35% of “normal dieters” progress to pathological dieting. Of those, 20-25% progress to partial or full-syndrome eating disorders (Shisslak & Crago, 1995).
- 25% of American men and 45% of American women are on a diet on any given day (Smolak, 1996).
- Americans spend over $40 billion on dieting and diet-related products each year (Smolak, 1996).
Statistics References


Please also cite the National Eating Disorders Association’s Information and Referral Helpline: 1-800-931-2237 and web site: www.NationalEatingDisorders.org
Characteristics of Fad Diets

1. Limited food choices
2. Excludes certain food groups and lacks certain nutrients
3. Requires special or unusual foods or supplements, which can be expensive
4. Promotes rapid weight loss of more than 2 pounds per week
5. Can only be followed for short periods of time (difficult to maintain)
6. Diet backed by personal testimonies, rather than by sound medical research

Weight loss occurs when the amount of calories consumed is less than the energy needed by the body.

Source: Virginia Action for Health Kids
Fact Sheet #3

**Body Mass Index and Health**

Many Americans are becoming overweight or obese (1-3). These conditions can lead to chronic diseases such as high blood pressure, diabetes, stroke, cancer, and diseases of the gallbladder, heart and lungs (1-8). Such diseases can reduce the quality of life and can also lead to death (1, 4, 9). Body Mass Index (BMI) is one of the commonly used measures of obesity.

**What is Body Mass Index (BMI)?**

BMI is a ratio of a person’s weight to height. BMI is commonly used to classify weight as “healthy” or “unhealthy.”

**How is BMI determined?**

BMI can be determined by using the following equation:

\[
BMI = \frac{705 \times \text{Body weight}}{(\text{Height} \times \text{Height})}
\]

Example:

A person who is 5 feet and 6 inches (66 inches) tall and weighs 155 pounds has a BMI of 25.

1 foot = 12 inches, therefore 5 feet = 5x12 = (60 inches) /6 inches = 66 inches

BMI = 705 x 155 / (66 x 66) = 25

**What does BMI mean?**

BMI values between 18.5 and 24.9 are considered “normal” or “healthy” weight. (Table 1). BMI values between 25 and 29.9 are considered “overweight” and 30 and above are considered “obese.” BMIs above 25 are unhealthy and have been shown to increase the risk of certain chronic diseases (1-8). BMIs under 18.5 are considered “underweight.”

**Table 1 Body Mass Index Categories**

<table>
<thead>
<tr>
<th>BMI</th>
<th>Weight Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5-24.9</td>
<td>Normal Weight</td>
</tr>
<tr>
<td>25 – 29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30 and above</td>
<td>Obese</td>
</tr>
</tbody>
</table>

Table 2 can also be used to estimate BMI. Find height in inches. Move across to the right and choose the nearest weight in pounds. BMI can be found at the bottom of that column.
### Table 2 Body Mass Index Look-up Table

<table>
<thead>
<tr>
<th>Height</th>
<th>Weight in Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>4’ 10” (58”)</td>
<td>91, 96, 100, 105, 110, 115, 119, 124, 129, 134, 138, 143, 148, 153, 158, 162, 167</td>
</tr>
<tr>
<td>5’ (60”)</td>
<td>97, 102, 107, 112, 118, 123, 128, 133, 138, 143, 148, 153, 158, 163, 168, 174, 179</td>
</tr>
<tr>
<td>5’ 1” (61”)</td>
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<tr>
<td>5’ 2” (62”)</td>
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<tr>
<td>5’ 3” (63”)</td>
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<tr>
<td>5’ 4” (64”)</td>
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<tr>
<td>5’ 5” (65”)</td>
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<td>5’ 6” (66”)</td>
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<tr>
<td>5’ 7” (67”)</td>
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<tr>
<td>5’ 8” (68”)</td>
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<tr>
<td>5’ 9” (69”)</td>
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<tr>
<td>5’ 10” (70”)</td>
<td>132, 139, 146, 153, 160, 167, 174, 181, 188, 195, 202, 209, 216, 222, 229, 236, 243</td>
</tr>
<tr>
<td>5’ 11” (71”)</td>
<td>136, 143, 150, 157, 165, 172, 179, 186, 193, 200, 208, 215, 222, 229, 236, 243, 250</td>
</tr>
<tr>
<td>6’ (72”)</td>
<td>140, 147, 154, 162, 169, 177, 184, 191, 199, 206, 213, 221, 228, 235, 242, 249, 256, 264</td>
</tr>
<tr>
<td>6’ 1” (73”)</td>
<td>144, 151, 159, 166, 174, 182, 189, 197, 204, 212, 219, 227, 235, 242, 249, 256, 264, 272</td>
</tr>
<tr>
<td>6’ 2” (74”)</td>
<td>148, 155, 163, 171, 179, 186, 194, 202, 210, 218, 225, 233, 241, 249, 256, 264, 272, 279</td>
</tr>
<tr>
<td>6’ 3” (75”)</td>
<td>152, 160, 168, 176, 184, 192, 200, 208, 216, 224, 232, 240, 248, 256, 264, 272, 279, 279</td>
</tr>
<tr>
<td>BMI</td>
<td>19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35</td>
</tr>
</tbody>
</table>

### Can BMI be used by everyone?

For most people, BMI provides a good measure of obesity. However, BMI does not provide actual information on body composition (i.e. the properties of muscle, bone, fat, and other tissues that make up a person’s total body weight), and may not be the most appropriate indicator to determine health status for certain groups of people. For example, athletes with dense bones and well developed muscles or people with large body frames may be obese by BMI standards (i.e. they have BMIs greater than 30), but yet have little body fat. On the other hand, inactive people may seem to have acceptable weights when, in fact, they may have too much body fat. Similarly, a petite gymnast may be considered underweight but not unhealthy (10). BMI, when used for children and adolescents who see still growing (11), pregnant women, people with large body frames, or petite and highly muscular individuals, should be interpreted cautiously.

### How does BMI relate to health?

BMI is generally related to body fat. Higher BMIs usually mean higher body fat (3). As body fat or BMI increases, especially from values equal to or greater than 30, health risks increase (3). Being overweight (BMI of 25 to 30) or being obese (BMI greater than 30) increases the risk of...
Fact Sheet #3 Continued

having high blood pressure, heart disease, stroke, diabetes, certain types of cancer, arthritis, and breathing problems (4-8). Research shows that being obese lowers one’s life expectancy (4, 9). When overweight or obese people lose weight, they also lower their blood pressure, total cholesterol, LDL (or “bad”) cholesterol, increase their HDL (or “good”) cholesterol, improve their blood sugar levels, and reduce their amount of abdominal fat (4).

What Research Studies Relate BMI to Diseases and Longevity?

In 1998, the National Institutes of Health issues a report to identify and treat obesity and overweight. Many scientific research studies suggest that weight loss reduces chronic diseases and improves the life span of people who are overweight. This report provided recommendations to clinicians and the public about weight management (3). In developing this report, more than 43,627 research articles were obtained from a search of the scientific literature and reviewed by a panel of researchers. Researchers have examined the importance of weight reduction in people with high blood cholesterol (4), high blood pressure (5), diabetes (6), cancer (7), and osteoarthritis (8), and reported that weight loss reduces the risks for those diseases.

Conclusions

The link between BMI and health shoes that overweight or obese people are more likely than those at normal weight to have medical problems such as high blood pressure, high cholesterol, stroke, diabetes, and heart disease. Research studies have shown that even a weight loss of 1-2 pounds per week for six months can improve the health of overweight people (3). The goal of weight loss should be to improve health. Rapid weight loss, swings in weight, and improper dieting should not be the goal (12, 13).

Authors

Hazel A. Hiza, Ph.D., R.D., Charlotte Pratt, Ph.D. R.D., Anne L. Mardis, M.D., M.P.H., and Rajen Anand, Ph.D.

Related Web Sites

You can find more information about BMI, weight, nutrition, and health by visiting the following web sites:

American Dietetic Association ................................................................. http://www.eatright.org
American Heart Association .............................................................. http://www.americanheart.org
National Heart, Lung, and Blood Institute ........................................... http://www.nhlbi.nih.gov

References

Fact Sheet #3 Continued


Information Search:
Lifestyle Habits That Increase Health Risks

Most Common Causes of Death, United States, 2001*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseases of the Heart</td>
<td>246.8</td>
</tr>
<tr>
<td>All Cancers</td>
<td>195.6</td>
</tr>
<tr>
<td>Stroke</td>
<td>57.7</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>43.6</td>
</tr>
<tr>
<td>Unintentional injuries</td>
<td>35.5</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>25.2</td>
</tr>
<tr>
<td>Influenza and pneumonia</td>
<td>21.8</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>19.0</td>
</tr>
<tr>
<td>Nephritis and nephrosis</td>
<td>13.9</td>
</tr>
<tr>
<td>All other causes</td>
<td>192.4</td>
</tr>
</tbody>
</table>

*Rates are age adjusted to 2000 total U.S. population.

Select one of these “killer” diseases to investigate. You may use the Internet, library or classroom resources to search for information to answer the following questions.

1. Which disease did your group select?

2. What are the common risk factors that contribute to this disease?
   (A risk factor might be cigarette smoking, being overweight, etc.)

3. How might a person’s diet or lifestyle increase his or her risk for this disease?

4. What steps could be taken to reduce the risk for this disease?

5. Where can you find credible information about this disease?
**SEARCH for Solutions**

The SEARCH for Solutions takes you step-by-step through the problem-solving process. Complete the steps below as you solve practical problems. You may go through the steps in a different order, but it is important to complete every step.

**State the problem to be solved.**

**Examine information needed to solve the problem.**

<table>
<thead>
<tr>
<th>GOALS &amp; VALUES:</th>
<th>FACTS:</th>
<th>CONSIDERATIONS:</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

**Analyze options or alternatives.**

<table>
<thead>
<tr>
<th>POSSIBLE SOLUTIONS:</th>
<th>POSSIBLE CONSEQUENCES:</th>
<th>EXPECTED OUTCOME:</th>
</tr>
</thead>
<tbody>
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</table>

**Review the options and select the best choice. Place a check beside your solution listed above. Provide logical reasons for your choice.**

Defend your solutions:
- Relevance to the problem
- Ethical base (positive long-term effects on all involved)
- Ability to resolve the problem
- Strength based on facts

**Chart and start a plan for action. Identify the actions you need to take, when they will be done, and who will do them.**

**Highlight the outcome of your actions. Evaluate whether or not your choice was best. Identify what you have learned from solving this problem. Did you discover another solution you could have tried?**
Assess Nutrition and Wellness

Competencies C-4, C-6
Activity Sheet #3

Eat Right

A Student Body topic area to help young people explore good nutrition, eating disorders, healthy snacks, supplements, vegetarianism, and more

Have you heard the expression, “You are what you eat”? In many ways it’s true! Healthy eating pays off both now and in the future. Good nutrition helps you control your weight, maintain energy, ward off illnesses, and feel good—and you’ll probably live longer, too!

Through “Eat Right” projects, young people learn why and how to make wise food choices.

Topics You Might Address Through “Eat Right” Projects

On the list below, check the project areas that interest you and that fit the needs of other young people around you. Add your own ideas on the blank lines.

Then, circle your top three interests/concerns. If working in a group, first write down each person’s top three interests/concerns. Discuss these options, then circle the group’s top three interests/concerns.

☐ nutrition basics
☐ how to use the food guide pyramid
☐ understanding food labels
☐ healthy snacking
☐ eating disorders (anorexia, bulimia, gorging, etc.)
☐ facts and myths about nutritional and herbal supplements
☐ how to build a healthy diet as a vegetarian
☐ healthy eating on a budget
☐ how to reduce food waste
☐ safe food handling
☐ how to eat right for better sports performance
☐ how to eat right for current and future health
☐ how food advertising influences eating habits
☐ careers related to nutrition and food safety
☐ ________________________________
☐ ________________________________
☐ ________________________________

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Dieting Statistics in America

Estimate the percentage for each question below. Write your answers in the blanks beside each question. Your teacher will provide the actual percentages. Compare your estimates to the research data.

_____ How many 1st-3rd grade girls say they want to be thinner?

_____ How many 10 year olds report they are afraid of being fat?

_____ What is the average height and weight of an American woman?

_____ What is the average height and weight of an American model?

_____ Most fashion models are thinner than what percent of American women?

_____ What percent of 9 and 10 year-old girls say they feel better about themselves if they are on a diet?

_____ What percent of 9-11 year-olds are “sometimes” or “very often” on diets, and what percent of their families are “sometimes” or “very often” on diets?

_____ What percent of women recently surveyed on a college campus had attempted to control their weight through dieting?

_____ What percent of all dieters will regain their lost weight in 1-5 years?

_____ What percent of “normal dieters” progress to partial or full-syndrome eating disorders?

_____ What percent of American men and what percent of American women are on a diet on any given day?

_____ Americans spend how much on dieting and diet-related products each year?
Understanding Eating Disorders

Introduction

Eating disorders afflict millions of people, thousands of which will die from them yearly. A 1990 study by the National Association of Anorexia Nervosa and Associated Disorders, found that 11% of high school students suffer from an eating disorder.

You have noticed that your friend has had significant fluctuations in their weight in a short period of time. You fear your friend may become part of the statistics listed above and begin to wonder if your friend has an eating disorder. What should you do and who can help?

Your Task

As a friend, you cannot ignore your suspicions; however you do not want to wrongly accuse your friend of having an eating disorder. You will be given a scenario in which you will use the Internet to research several disorders and figure out which disorder your friend is suffering from. After determining the disorder, your group will devise a set of strategies that can be used to help your friend overcome their problem.

Prepare a PowerPoint presentation concerning the information you have researched and present it to the class. In this presentation, your group will discuss the eating disorder, as well as the set of strategies that you formulated to help your friend.

The WebQuest Investigation

There are mainly four types of eating disorders:

- anorexia nervosa
- bulimia
- compulsive overeating
- binge eating

Below are four scenarios that refer to one of the above disorders. Your group will be assigned to use one of these scenarios:

A. You have noticed that one of your friends has been very depressed lately. She or he has also had fluctuations in weight as well as low self esteem. You have tried to comfort your friend but your friend believes that everything will only be okay if they can just lose weight.
B. Your friend has become severely critical of her weight. You have also noticed that she sometimes skips lunch at school; however, if she does eat lunch she always excuses herself to the bathroom before returning to class. Recently while searching for a piece of gum in her purse you found a box of laxatives.

C. You have noticed that your friend eats very little at lunch; however, when you are with him on the weekend he tends to eat large quantities of food. Also, all of his conversations tend to be focused on his body image and lately he has been withdrawing from activities because of embarrassment about his weight.

D. Your friend has become excessively thin yet she constantly complains that she is too fat. She has begun a strict workout routine after school which involves two hours of intense training. At school you have noticed she is always tired and last week she fainted at her locker. In addition, at lunch she is always concerned about the amount of calories that she is consuming.

Step One

Your group needs to follow the two instructions below to help your friend.
1. Research the internet, library sources, and other materials to determine which eating disorder your friend has. (links are provided below)

2. Research strategies people use to overcome eating disorders.

Step Two

Here are some Internet websites that may help you with your investigation.

http://www.mirror-mirror.org/eatdis.htm - This website has information concerning definitions, signs, symptoms, getting help, and approaching a loved one.

http://www.edauk.com/ - Provides information and help on all kinds of eating disorders.

http://www.something-fishy.org/ - Contains valuable information on anorexia nervosa, bulimia, and compulsive overeating.

http://www.anred.com/ - Information about all types of eating disorders.

http://www.nlm.nih.gov/medlineplus/eatingdisorders.html - Medline Plus is a service of the U.S. National Library of Medicine and the National Institutes of Health. Includes links to a variety of other resources.

http://www.nimh.nih.gov/publicat/eatingdisorders.cfm - National Institute of Mental Health offers information and suggestions for helping.
Step Three

Design your own strategy for helping your friend overcome their disorder. Tips:
   a) Choose who you will discuss this problem with
   b) Determine which health care professionals should be contacted
   c) Make sure you confront your friend in a setting where they will not feel threatened
   d) Do not make accusations when confronting your friend

Evaluation

Develop a PowerPoint presentation to share with your friend to help her or him understand about the eating disorder. Your PowerPoint presentation should be 5-10 minutes in length and include the following...

   • A definition of the eating disorder for which your group researched.
   • Signs and symptoms
   • At least one strategy your group found on the Internet that is currently being used to help someone overcome an eating disorder
   • A strategy designed by the group.

Conclusion

In this activity you have learned about many eating disorders. Not only have you gained information about the eating disorder your team extensively researched, you have also learned about the other disorders presented by your classmates. In addition to learning about eating disorders, you have also strengthened your research, group work, and presentation skills. Although this was a class assignment, remember that the knowledge you have gained can be applied in real life situations. It is also important to remember that you should always seek professional help if this type of situation actually arises.
# Eating Disorders Webquest Scoring Guide

<table>
<thead>
<tr>
<th>Criterion</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research and Accuracy</strong></td>
<td>Diagnosed the correct eating disorder for the case study.</td>
<td>Diagnosed the correct eating disorder for the case study.</td>
<td>Diagnosed the correct eating disorder for the case study.</td>
</tr>
<tr>
<td></td>
<td>Consulted a minimum of 5 credible sources. Information was</td>
<td>Consulted a minimum of 3 credible sources. Information was</td>
<td>Consulted a minimum of 2 credible sources. Information was</td>
</tr>
<tr>
<td></td>
<td>accurate and complete.</td>
<td>accurate through not complete.</td>
<td>accurate though not complete.</td>
</tr>
<tr>
<td><strong>Oral Presentation</strong></td>
<td>All members participated. Voices projected throughout the</td>
<td>Not all members participated. Voices projected</td>
<td>Not all members participated. Voices projected throughout</td>
</tr>
<tr>
<td></td>
<td>classroom. Important information was stressed.</td>
<td>throughout the classroom. Important information was included.</td>
<td>the classroom. Important information was missing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>PowerPoint Presentation</strong></td>
<td>Good use of visual design and graphic elements. Presentation</td>
<td>Good effort to include graphic elements. Presentation met</td>
<td>Limited use of visual design and graphic elements. Presentation</td>
</tr>
<tr>
<td></td>
<td>met time requirements and supported oral presentation.</td>
<td>met time requirements and generally supported oral</td>
<td>did not meet time requirements, generally supported oral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>presentation.</td>
<td>presentation.</td>
</tr>
<tr>
<td><strong>Group Strategy</strong></td>
<td>Appropriate health care providers were identified to help. Group</td>
<td>Appropriate health care providers were identified to help. Group</td>
<td>Appropriate health care providers were identified to help. Group</td>
</tr>
<tr>
<td></td>
<td>strategy was appropriate and realistic.</td>
<td>strategy was appropriate though somewhat unrealistic.</td>
<td>strategy was appropriate though entirely unrealistic.</td>
</tr>
<tr>
<td><strong>Teamwork</strong></td>
<td>All team members participated throughout the project. Time and</td>
<td>All team members participated throughout the project. Time and</td>
<td>Not all team members participated in the project. Time and</td>
</tr>
<tr>
<td></td>
<td>other resources were well utilized. Team was organized.</td>
<td>other resources were well utilized at times. Team was usually</td>
<td>other resources were utilized though team was sometimes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>organized.</td>
<td>disorganized.</td>
</tr>
</tbody>
</table>

| TOTAL POINTS               |                                                                     |                                                                   |                                                                   |
Calculate Your Basal Metabolic Rate

You burn calories or use energy no matter what you’re doing, or not doing. Even when you are lying on the sofa just watching television your body is burning calories to maintain your heartbeat, breathing and normal body temperature. Your Basal Metabolic Rate (BMR) is the number of calories you burn every day doing nothing. This is the minimum number of calories you need each day. Your level of physical activity each day requires additional energy.

Basal Metabolic Rate decreases as you age. Likewise, skipping meals in hopes of losing weight also decreases your BMR; within a few days your body adapts to receiving less fuel and it slows down to conserve energy. Therefore, eating regular, balanced meals every day (not skipping meals) and a regular routine of cardiovascular exercise can increase your BMR and help you burn more calories each day rather than store calories as fat.

To get an estimate of your BMR, complete the following calculation:

Males: your weight X 12 = your BMR

--- X 12 = ---

Females: your weight X 11 = your BMR

--- X 11 = ---

This calculation provides an estimate of your BMR. To get an exact calculation of your BMR you would need to consult a nutritionist or dietitian.

If you consumer more calories each than you burn, your body will store those calories as fat, whether the calories originated from protein, carbohydrate, fat or alcohol — if you do not use it, your body will store it.
Setting My Goals for a Healthy Weight

Write the answers to the questions below to help you make a plan and set goals for a healthy weight that is realistic for you.

1. Starting with today. What are your feelings today about your current body weight and level of fitness?
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

2. List at least three goals that will help you change your body weight or level of fitness. Be specific. Don’t say, “I plan to cut back on snack foods.” Do say, “I will cut back to only one soda per day.” That is more specific and measurable. Also, list the date or amount of time you need to achieve these goals.
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

3. Is your current diet meeting the guidelines recommended by the Dietary Guidelines for Americans, 2005? If not, what areas can you improve?
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

4. List some foods below that will help you balance your diet to meet the dietary guidelines.
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

5. List any foods below that you need to avoid. These foods may be high in calorie content, you may consume too much of these foods, or they may lack nutrient value.
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
**Assess Nutrition and Wellness**

**Competencies C-5, C-6**

**Activity Sheet #8**

Name _______________________

**Keeping Track of My Progress**

**Toward a Healthier Lifestyle**

Go over this checklist every week to answer each question Yes or No. Review your progress to determine what adjustment you need to make to stay on track to meet your goals.

<table>
<thead>
<tr>
<th>Weekly Progress Check</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am committed to making a change.</td>
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<tr>
<td>2. My goals are realistic for me.</td>
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<td>3. Include exercise every day</td>
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<td>4. I consume less fat in my diet.</td>
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<td>5. I monitor the total calories in my diet.</td>
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<tr>
<td>6. I eliminated extra foods that I don’t need.</td>
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<tr>
<td>7. I avoid automatic eating “just because.” Just because I always have a snack after school. Just because everyone else was having dessert. Just because I was watching tv.</td>
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<tr>
<td>8. I plan meals ahead of time.</td>
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<td>9. I control the portion sizes that I eat.</td>
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<tr>
<td>10. I eat slowly and only at the table.</td>
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<tr>
<td>11. I avoid social binges with friends.</td>
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<tr>
<td>12. I do not eat out more than once per week. When I do eat out, I choose foods carefully and monitor the portion sizes I eat.</td>
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<tr>
<td>13. I have a strong support group to help me keep focused on my goals.</td>
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<td>15. I reward myself for small achievements.</td>
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</table>
Just For the Health of It

Jarod, a lifelong friend of yours, has lost over 200 pounds over the last two years. When he realized that his XXXXXL size and history of family health problems was dangerous and ruining his love life, he decided to make some changes. Utilizing Subway’s low fat sandwich menu items incorporating exercise by walking to the restaurant everyday, he is now both fit and trim.

Unfortunately, yesterday as Jarod was walking through Best Buy, the 100 TVs blared CNN’s latest breaking story. Jarod couldn’t believe his ears when the newscaster announced, “Subway is going out of business! All stores will close at midnight tonight.”

Distraught by the news and fearing the consequences, Jarod comes to you in a panic. “What will I do everyday for lunch now? Will I actually have to plan my own meals?”

Because of your expertise in nutrition and wellness, he asks for your help. Jarod wants to know what YOU do to maintain a healthy lifestyle.

You are excited by the opportunity to apply all of your knowledge to help out a friend. Jarod has asked that you provide him you daily menu plans, exercise regimen, and helpful information about the health issues that plague his family.

You have decided to provide Jarod with the following useful information:

A 3-day menu plan including breakfast, lunch, dinner, and snacks. At least one meal must come from a fast food restaurant. This plan will follow the dietary guidelines and include the appropriate number of servings from each group in the food guide pyramid. An appropriate representation of the essential nutrients must be incorporated into each menu. To best explain your plan to Jarod, you list the menu plan and then write an analysis of each daily menu including all of the above information.

An exercise plan including the type of exercises he should do, the duration and frequency of the activity, the number of calories that are burned in a given amount of time, and the health benefits of following your plan.

Research one health concern that plagues Jarod’s family. (Jarod’s family has had a lot of health problems -- diabetes, high blood pressure, heart disease, high cholesterol, osteoporosis, obesity, anorexia, and cancer. You should explain to Jarod how the disease is related to nutrition and fitness, common symptoms, and dietary/lifestyle recommendations.

Assemble all of the information into a report that is bound and includes a cover page. Use the Just for the Health of It Check List to ensure you have completed everything for this assignment. You will make an oral presentation of your plan to Jarod (the class).

Jarod is counting on you to help him maintain the health and fitness levels he has worked so hard to achieve. Don’t let him down.
Just For the Health of It Checklist

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Self</th>
<th>Peer</th>
<th>Teacher</th>
</tr>
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<tr>
<td>Bound</td>
<td>_____</td>
<td>_____</td>
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<tr>
<td>Colorful/Creative Cover page</td>
<td>_____</td>
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<td>Project well-planned/organized</td>
<td>_____</td>
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<td>Project is neatly typed</td>
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<table>
<thead>
<tr>
<th>3-Day Menu</th>
<th>Self</th>
<th>Peer</th>
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</tr>
</thead>
<tbody>
<tr>
<td>3 complete daily menus (breakfast, lunch, dinner, snacks)</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>one meal comes from a fast-food restaurant</td>
<td>_____</td>
<td>_____</td>
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<tr>
<td>Dietary Guidelines incorporated into daily menu</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Appropriate # of servings represented</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
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<tr>
<td>Appropriate representation of essential nutrients</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Written analysis of each daily menu is thorough and well-written</td>
<td>_____</td>
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<table>
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<th>Exercise Plan</th>
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</tr>
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<tbody>
<tr>
<td>Types of exercise identified</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Duration and frequency of activity</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td># of calories burned in a given time period listed</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Health benefits included</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
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</table>

<table>
<thead>
<tr>
<th>Health Concern</th>
<th>Self</th>
<th>Peer</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause of the health concern identified</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Symptoms of the health concern identified</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Dietary changes/recommendations identified</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
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</table>
# Just For the Health of It Scoring Guide

<table>
<thead>
<tr>
<th>Criterion</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Presentation</td>
<td>Develops a final product that meets all check list items. Clearly, creatively &amp; effectively communicates the main idea and purpose.</td>
<td>Develops a final product that meets all check list items. Communicates the main ideas accurately and adequately.</td>
<td>Develops a final product that communicates important information. May include some fact errors or some information may be lacking or unclear.</td>
<td></td>
</tr>
<tr>
<td>3-Day Menu</td>
<td>Menu is complete with serving sizes, nutrients, food groups, etc. Menu meets all Dietary Guidelines.</td>
<td>Menu is mostly complete with serving sizes, nutrients, food groups, etc. Menu meets most of the Dietary Guidelines.</td>
<td>Menu is complete although some details may be missing or incorrect such as serving sizes, nutrients, or food groups. Dietary Guidelines omitted.</td>
<td></td>
</tr>
<tr>
<td>Menu Analysis</td>
<td>Written analysis is clear and complete. Demonstrates an understanding of the role of the Dietary Guidelines and MyPyramid in planning healthful meals.</td>
<td>Written analysis is clear and complete. No more than 3 errors in applying the Dietary Guidelines and MyPyramid in planning healthful meals.</td>
<td>Written analysis is clear and complete. More than 3 errors in applying the Dietary Guidelines and MyPyramid in planning healthful meals.</td>
<td></td>
</tr>
<tr>
<td>Fitness Plan</td>
<td>Provides a complete and accurate explanation of the exercise and expected outcomes.</td>
<td>Provides a nearly complete explanation of the exercise and expected outcomes. Accurate though some detail may be missing.</td>
<td>Provides an explanation of most exercises. Accurate though some detail may be missing.</td>
<td></td>
</tr>
<tr>
<td>Health Concern Research</td>
<td>Research is thorough and information is accurate. Only credible sources are cited; two or more sources are used. Recommendations for lifestyle changes are appropriate.</td>
<td>Research is accurate. Only credible sources are cited; two or more sources are used. Recommendations for lifestyle changes are appropriate.</td>
<td>Research is accurate. Only credible sources are cited; Recommendations for lifestyle changes are weak or missing.</td>
<td></td>
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</tbody>
</table>

Total Score: ________________

Comments: _____________________________________________________________________________________
______________________________________________________________________________________________
Assess Nutrition and Wellness

Competency C-6  
Assessment 2(a)  
Name ______________________________

Lighten Up

Instead of a high-fat ingredient like sour cream or mayonnaise, substitute lowfat yogurt. Or switch to skim milk instead of using whole. It’s these little here-and-there changes that add up to big fat-and-calorie savings.

<table>
<thead>
<tr>
<th>Instead of...</th>
<th>Substitute...</th>
<th>Fat, grams</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole milk (1 cup)</td>
<td>Skim milk (1 cup)</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>Whole egg (1)</td>
<td>Egg whites (2)</td>
<td>6</td>
<td>47</td>
</tr>
<tr>
<td>Cream cheese (1 oz)</td>
<td>Neufchatel (1 oz)</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Ricotta cheese (1/2 cup)</td>
<td>1% cottage cheese (1/2 cup)</td>
<td>14</td>
<td>52</td>
</tr>
<tr>
<td>Cheddar cheese (1 oz)</td>
<td>Mozzarella, skim (1 oz)</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>Heavy cream (1 Tbl)</td>
<td>Half and half (1 Tbl)</td>
<td>32</td>
<td>15</td>
</tr>
<tr>
<td>Sour cream (1/2 cup)</td>
<td>Lowfat yogurt (1/2 cup)</td>
<td>18</td>
<td>172</td>
</tr>
<tr>
<td>Fudge sauce (2 Tbl)</td>
<td>Chocolate syrup (2 Tbl)</td>
<td>4</td>
<td>32</td>
</tr>
</tbody>
</table>

And save...

Recipes to Lighten Up

Review the recipes below and indicate ingredient substitutions or cooking method substitutions to lower the overall fat content.

### Lasagne
- 1 lb Italian sausage
- 1 clove garlic, minced
- 1 Tbl basil
- 1 1/2 tsp salt
- 1 16 oz can whole tomatoes
- 2 6 oz cans tomato paste
- 10 oz lasagne noodles
- 2 eggs
- 3 c Ricotta
- 1/2 c grated Parmesan or Romano cheese
- 2 Tbl parsley flakes
- 1 tsp salt
- 1/2 tsp pepper
- 1 lb mozzarella cheese, sliced very thin

### Taco Salad
- 2 c shredded lettuce
- 1 15-oz can dark red kidney beans, drained
- 2 med. tomatoes, chopped
- 1 Tbl chopped canned green chiliies
- 1/2 c sliced ripe olives
- 1 large avocado, chopped
- 1/2 c dairy sour cream
- 2 Tbl bottled salsa
- 1 tsp minced onion
- 3/4 tsp chili powder
- 1/4 tsp salt
- 1/2 c shredded Cheddar cheese
- 1/2 c crushed corn chips

### Chicken Pot Pie
- Pastry for 2-crust pie
- 1/2 c chopped onion
- 6 Tbl butter
- 1/2 c all-purpose flour
- 1 c heavy cream
- 3 c chicken broth
- 3 c cubed cooked chicken
- 1 10-oz pkg frozen peas and carrots
- 1/4 c chopped canned pimiento

### Cheeseburger and Fries
- 1 1/4 lb hamburger patty
- 1 hamburger bun
- 1 slice Cheddar cheese
- ketchup or mustard and pickles
- 1 c frozen French fries
- 1/4 c shredded Cheddar cheese
- 1/4 c Ranch dressing

Fry hamburger patty until no pink remains. Top with sliced Cheddar cheese and allow cheese to melt slightly. Serve cheeseburger on bun with condiments.

Unit 1
Manage Resources to Promote Good Health

Practical Problem:
How do I manage all of my resources to improve and maintain good health?

Missouri Family and Consumer Sciences Competencies:
(D-1) Demonstrate the ability to plan and prepare healthful meals and snacks using available resources (e.g., time, money, personal energy, skills)
(D-2) Identify safety and sanitation practices.
(D-3) Compare ways to select, store, prepare, and serve food for optimum nutrition.

Enabling Objectives for Competency Mastery:
1. Demonstrate menu planning knowledge and skills that utilize various nutrition guidelines such as MyPyramid.
2. Demonstrate food preparation techniques to reduce overall fat and calories for healthful meals and snacks.
3. Compare various types of resources such as time, money, talent, and natural resources.
4. Recognize and describe practices for kitchen safety, food handling, and proper sanitation.
5. Compare options with fresh, frozen, canned, and prepackaged food for optimum nutrition.

Teacher Background Information
Rationale

While nutrition knowledge is important for making healthful decisions, resource management skills are equally important. It takes time to plan healthful meals, shop for ingredients and prepare foods. Millions of people eat out every day because they don’t feel they have time to prepare meals at home.

The National Restaurant Association reported in 2003 that Missouri had 12,745 eating and drinking establishments, and the organization projected that Missouri sales in 2005 would exceed $7 billion. The average American adult eats out approximately 4.2 times per week.

Budgeting is a key management skill as consumers must make buying decisions regarding convenience foods, quality of foods, and availability of foods in season, and costs of eating out. Some foods, such as fresh fruits, are more expensive when they are not in season. Oddly, these fruits cost more when they are not at their peak for flavor or...
nutrient content. Good consumers must know the availability of foods in season, and know other options for nutritious foods such as canned foods or frozen foods. Comparison shopping helps determine which brand or package size is the most economical.

Kitchen safety issues such as food handling and storage also affect resource management. Foods that are handled improperly or stored improperly are wasted. A good buy at the grocery saves nothing if it must be thrown out with the trash. Simple storage and handling techniques will pay a high dividend in the long run.

Two government agencies, the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) monitor food products to ensure safety. The FDA conducts tests, sets standards, and enforces laws regulating food quality and processing. FDA inspectors make regular inspections to see that the laws are being followed. The USDA regulates and inspect meat and poultry during slaughter and processing.

Although consumers rely heavily on these and other government agencies to protect the food supply, food safety is everyone's responsibility. The greatest threats to food safety - bacteria and viruses - are the hazards over which the consumer has the greatest control.

Individuals should apply Hazard Analysis Critical Control Point (HACCP) principles to prevent food borne illnesses at home. Critical consumer control points for food safety are found in the home and the supermarket. These two areas provide opportunities for foods to become exposed or contaminated.

The United States Centers for Disease Control report the following food handling factors that most commonly lead to food borne disease (in order of occurrence):

1. Improper holding temperatures
2. Poor personal hygiene
3. Inadequate cooking
4. Contaminated equipment
5. Food obtained from an unsafe source

Many people who have diarrhea, vomiting, an upset stomach, fever, or cramps may think they suffer from the flu. Some may be suffering from food borne illness instead. Most food borne illness can be prevented by handling foods properly.

Web Resources for Teachers

The National Restaurant Association provides downloadable information for eating out sensibly including links to Dine Out Smart, and information on food safety. [http://www.restaurant.org/foodsafety/index.cfm](http://www.restaurant.org/foodsafety/index.cfm)

The National Restaurant Association provides teaching materials and posters for National Food Safety Month in September. [http://www.nraef.org/nfsem/](http://www.nraef.org/nfsem/)

Science and Our Food Supply
Producer: National Science Teachers Association
1840 Wilson Boulevard
Epicurious — Bon Appetit & Gourmet recipes, food dictionary, much more
The Food Network — celebrity chefs, 12,000 recipes from Food Network shows
SOAR — Searchable Online Archive of Recipes has 67,000+ recipes
RestaurantBeast — Search recipes and add your own

PBS’s cooking shows — Julia Child and other master chefs
Sally's Place — culinary site for consumers has good info on international cuisine
Culinary Connection — 73,000 recipes

FoodWeb.com — great links to cooking schools, recipe sites, F & B manufacturers
Recipe Link — well-organized guide to 10,000+ cooking and recipe links
Vegetarian Resource Group — Recipes, nutrition, cookbooks

References:

Cooking at Home with The Culinary Institute of America (2003). Weldon Owen, Inc.: San Francisco, CA.

http://www.foodsafety.gov/~fsg/fsgaway.html Food Safety

Instructional Strategies

1. Demonstrate menu planning knowledge and skills that utilize various nutrition guidelines such as MyPyramid. (Competency D-1)
   a) Practice using MyPyramid to choose foods and develop a meal that is nutritious and healthy for you. Use Activity Sheet #1: Daily Food Plan to plan one day’s menu based on the food groups from MyPyramid.
   b) Use Activity Sheet #2: Developing a Meal Plan to practice planning and selecting foods for a meal. Each menu should reflect the Dietary Guidelines for Americans, 2005 and the food items should complement each other for an attractive, appealing menu.
c) Use Activity Sheet #3: **Weekly Menu Plan** to develop a menu for a full week. Evaluate your menu plan for the week based on the recommendations in the Dietary Guidelines for Americans, 2005 and MyPyramid.

d) Divide class into food lab groups. Each group select one menu created from Instructional Strategy 1(b). Use Activity Sheet #4: **Meal Preparation Schedule** and Activity Sheet #5: **Grocery List** to plan and prepare the menu. Each lab group should evaluate the other lab groups' menus based on nutritional quality, eye appeal, and taste appeal.

2. **Demonstrate food preparation techniques to reduce overall fat and calories for healthful meals and snacks.** (Competency D-1)
   a) Hand out Fact Sheet #1: **Ways to Lower the Fat Content of Foods**. Review each technique listed. Using the menu developed in Instructional Strategy 1(a), revise the menu using at least one of the techniques suggested.
   
b) Review the food preparation techniques included in Fact Sheet #2: **Cooking Methods Influence Fat Content**. Create a Venn diagram to compare dry-heat cooking methods with moist-heat cooking methods. Discuss the common characteristics and the differences among these cooking techniques.
   
c) Use Activity Sheet #6: **Comparing Dry-heat and Moist-heat Cooking Techniques** to list each cooking method described in Fact Sheet #2: **Cooking Methods Influence Fat Content**. Within each box, list several common foods that are prepared using this cooking method. Use two different colors of highlighters to indicate which foods are typically considered lower in fat and which foods are typically considered to be higher in fat content.

3. **Compare various types of resources such as time, money, and talent.** (Competency D-1)
   a) Use colored chalk or markers to create a mind map listing resources that every person has to plan and prepare meals. Brainstorm as many suggestions as possible such as time, money, talent, availability of a food, etc. On the mind map, list how each resource influences our food decisions.
   
b) Planning and preparing nutritious meals takes time and energy. Alternatives might include eating out, purchasing prepared meals, using technology to reduce the normal amount of time and energy needed, using convenience foods to reduce time and energy, or simplifying the work. Develop one meal plan for an evening meal. Then list alternatives that could be used to reduce the time and energy needed to prepare the meal.
   
c) Divide the class into five groups. Each group will create a menu and shopping list based on the financial and dietary restrictions of a family using the case studies from Activity Sheet #7: **Managing a Family Food Budget**.

4. **Recognize and describe practices for kitchen safety, food handling, and proper sanitation.** (Competency D-2)
   a) Define important vocabulary words related to food safety such as “pathogens,” “food-borne illness”, “bacteria,” “microorganism,” and “virus.” Create a K-W-L Chart with information students already know, and information they want to learn about how each of these terms affects food safety.
b) Investigate the number of deaths each year from food-related illnesses. Develop a chart to compare various data such as comparing Missouri to surrounding states, or comparing the number of deaths in Missouri from different food-related illnesses. Two resources to aid your investigation are: http://www.cdc.gov/ncidod/eid/vol5no5/mead.htm and http://www.cdc.gov/ncidod/diseases/list_foodborne.htm

c) Access food safety resources at http://www.foodsafety.gov/~fsg/fsgaway.html Divide the class into groups of three to five students to investigate food handling safety tips for various situations such as how to safely handle take-out food, food safety advice when camping or hiking, traveling with food, safety concerns with brown bag lunches, etc. Develop a poster or brochure to explain food handling safety issues. Take turns sharing the information with whole class.

Teacher Note: FOOD RISKS: PERCEPTION VS REALITY-- A Program to Promote Food Risk Awareness and Understanding. This program presents important food safety information to high school students and encourages critical thinking skills! Eight lessons and student quizzes are provided on various aspects of food safety. Prepared by the U.S. Food and Drug Administration and The International Food Information Council Foundation, 1993 http://www.cfsan.fda.gov/~dms/risk-toc.html

For more information on cooking to proper temperatures and additional resources, click here: http://www.foodsafety.gov/~fsg/cookit.html

d) Hand out Fact Sheet #3: Food Safety: Read the Label. Look in your shelves and refrigerator at home to see how many products you can identify with shelf-life dating information. Make a list of each food item and the type of dating used.

e) FCCLA Activity. Develop an educational campaign to celebrate National Food Safety month in September. Use the FCCLA Planning Process to select and organize your campaign. Choose print media, electronic media, or broadcast media for your campaign.

f) Hand out copies of Fact Sheet #4(a) & (b): The Most Common Food Borne Diseases and Using the "HACCP" Approach for Safety. Divide the class into groups to prepare brochures or newsletters for consumers to explain the importance of proper food handling at home.

g) Identify food safety concerns for special populations such as pregnant women, people with chronic illnesses, senior citizens. Create a graphic organizer to compare these special populations.

Questions for Discussion/Formative Assessment

- What food safety concerns affect all of these groups?
- How can you help to ensure these groups are protected?
Teacher Note: The Partnership for Food Safety Education provides resources for consumers and educators on vital food safety issues. The Fight BAC® campaign, developed in conjunction with the President's National Food Safety Initiative, is focused on safe food handling. Four simple steps will fight food-borne bacteria and reduce the risk of food-borne illness.
http://www.fightbac.org/main.cfm


Questions for Discussion/Formative Assessment
- What are the benefits of food irradiation?
- How does this process work?
- How does irradiation affect spoilage of foods?
- How does irradiation compare to a safety process such as pasteurization?
- What is the affect of irradiation on nutrient content of foods?
- How does food irradiation affect the price of food items?
- How are irradiated food items identified for the consumer?
- Is there a government agency responsible for monitoring this process? If so, who?

i) Use magnetic sheets with adhesive backing to design and produce refrigerator magnets with recommendations for safe handling of fresh produce. Use computer art, drawings, or photos clipped from magazines to illustrate the magnet.

Teacher Note: http://www.fightbac.org/main.cfm
The Partnership for Food Safety Education provides resources for consumers and educators on vital food safety issues. The Fight BAC® campaign, developed in conjunction with the President's National Food Safety Initiative, is focused on safe food handling. Four simple steps will fight food-borne bacteria and reduce the risk of food-borne illness.

5. Compare options with fresh, frozen, dried, canned, and prepackaged foods for optimum nutrition. (Competencies D-1, D-3)

   a) Compare the unit prices of fresh, frozen, dried, canned, and prepackaged foods such as strawberries, potatoes, green beans, artichokes, pineapple, or tomatoes. Assign each student one food item to investigate. Visit the grocery store to collect
the data or use online sources. Create a comparison chart for all foods to determine which foods are less expensive in which form.

b) Using the same food items from the previous instructional strategy, compare the changes in nutrient values when the method of preservation changes.

Questions for Discussion/Formative Assessment
- What factors influence the price of fresh foods?
- Why is the nutrient value different for fresh strawberries and frozen strawberries?
- What other differences might you notice among fresh, frozen, canned, or dried foods?

c) Compare the nutrient values and calories for selected dishes that can be prepared or purchased as a convenience item. Use online recipe sources or printed recipes that include the nutrient values for the dish. Compare the recipes to the food labels for the convenience foods. Examples might include a cheese pizza or burrito compared to frozen cheese pizza or burrito, spaghetti made from scratch versus canned spaghetti, or chicken pot pie.

Questions for Discussion/Formative Assessment
- How is our society influenced by convenience foods? For example, if you were going to prepare spaghetti, would you make fresh pasta or use dried pasta? Would you use fresh tomatoes to make the sauce, or use canned tomato sauce that you season? Would your dish be made from scratch if you used dried pasta or canned spaghetti sauce?
- If you were making a pie with fresh apples, but you used a frozen pie crust, would your pie be made from scratch or convenience? What if you made the pie crust, but used canned pie filling from the grocery store?
- What factors make a food item a “convenience” food?

Summative Assessments

Paper and Pencil

1. After practicing how to plan a nutritious meal in Instructional Strategy 1(a), use Activity Sheet #1: Daily Food Plan as a quiz to evaluate student mastery. (Competency D-1)

2. After students have completed Activity Sheet #6: Comparing Dry-Heat and Moist-Heat Cooking Techniques, and discussed the possible food choices for each cooking technique, hand out a new copy of the Activity Sheet to use as a quiz. This time students should only list food items that are considered lower in fat. (Competency D-1)
3. Write an article for the school newspaper that discusses ways to manage resources to provide nutritious meals. Offer at least five suggestions for using resources to provide nutritious meals, and explain at least five resources that all individuals have to manage. (Competency D-1)

4. Write a three to five page research paper discussing food irradiation and food safety. Include facts about irradiation, benefits and draw-backs of using the process, and current uses for food irradiation. List at least three credible sources for your research. (Competency D-2)

Classroom Experiences

1. Work in pairs to select one cooking method from Fact Sheet #2: Cooking Methods Influence Fat Content and prepare presentation for the class to illustrate this cooking technique. Use PowerPoint to present information for using this cooking method. (Competencies D-1, D-2, D-3)

2. Work in food lab groups to prepare a recipe from scratch and compare the item to the same convenience food. Evaluate the nutrition density of each food item, the flavor, the cost, and the time required to make the item. (Competencies D-1, D-2, D-3)

3. Work in food lab groups to compare food storage options. Select one food item to compare and prepare the food from fresh, frozen, dried, canned and any other storage methods that are commonly used. Use a taste test evaluation to compare the prepared foods. Also, prepare a cost analysis chart to compare the costs of each food storage option. (Competencies D-1, D-2, D-3)
Ways to Lower the Fat Content of Foods

◊ Use cooking spray in place of liquid cooking oil to grease pans.

◊ Use nonstick cookware.

◊ Steam, broil, grill, or bake food to avoid the fast used for sautéing and frying.

◊ Rely on chicken and beef stock, wine, and water to moisten and baste foods while they cook, instead of additional oil or butter.

◊ Use herbs and spices to flavor foods, instead of additional butter or cream.

◊ Learn about fat-cutting techniques such as replacing whole eggs with egg whites and using applesauce and puréed prunes in baked products in place of some of the butter.

◊ Skin poultry before or after cooking.

◊ Use water-packed tuna instead of the oil-packed version.

◊ Use ground turnkey breast instead of ground beef.

◊ Trim meat and poultry of external fat before cooking.

◊ Substitute flavorful fat-free spreads such as jams, jellies, chutneys, or mustards for butter or margarine.

Fact Sheet #2

Cooking Methods Affect Fat Content

There are two basic methods for cooking meats: **dry heat** and **moist heat**.

**Dry-heat** methods cook food either by direct, radiant heat, like the heat of a grill, or by indirect heat contained in a closed environment, such as an oven. No water or broth is added to the food during cooking. Dry-heat cooking methods may use fats or oils as a cooking aid, or it can be done without added fats or oils.

If fats or oils are added when using a dry-heat method such as grilling, broiling, and roasting, it is for flavor only. These cooking methods produce a flavorful exterior and a moist interior.

Fats or oils are needed when using dry-heat cooking methods such as sautéing, stir-frying, pan-frying, and deep-frying. Although each method relies on fats or oils as a cooking medium, the amount varies greatly among these techniques. These methods are all relatively quick, use high heat, and are best used with small pieces of tender food.

**Moist-heat** methods cook food using a liquid or steam. A complete meal can be prepared in one pot. Moist-heat cooking methods include steaming, poaching, boiling/simmering, braising, and stewing.

Poaching and steaming produce delicate flavors because no browning occurs. When braising or stewing, foods are first seared to create a browned exterior. The amount of liquid used in any moist-heat cooking methods varies greatly from a few teaspoons to a few quarts.
Fact Sheet #3

Food Safety: Read the Label

Food labels and packaging are excellent sources of information about food and guides for food safety. The primary source of food safety information is the shelf-life of the package, which can be presented in many different ways. Examples include:

- The "sell by" date -- this is the last day the product can be sold. It allows time for the product to be stored and used at home.
- The use by or "best if used by" date -- this is the freshness date; product may be safe after this date but will probably not be at peak quality.
- The "do not use after" or expiration date -- this is the last date the product should be used.

Other food safety information that can also be found on the label includes:

- If the food is graded or inspected. Eggs and fresh meat have a grade shield or inspection mark on the package to signify their safety and quality.
- How the food should be stored or prepared.
- The lot number of the package. Manufacturers place batch identification numbers on food packages. If there is a problem with a batch of food, news reports will advise people to return products with a certain number.
- One will also find the following on a food package:
  - The quantity of the contents by weight or volume or count.
  - The ingredients, listed in decreasing order. In other words, the ingredient present in the greatest amount is listed first.
  - The form of the food, such as sliced, whole, or chunk.
  - The nutritive value of the food.
  - Anti-tampering devices. These will reveal whether the container's original closing has been broken. It could be a plastic seal around the outside of a container or a safety button on the lid of a jar. If the seal is broken or the button is up, don't buy and don't use the product.
  - The name and address of the manufacturer or packer of the food.
The most common foodborne diseases

Foodborne disease is caused by consuming contaminated foods or beverages. Many different disease-causing microbes, or pathogens, can contaminate foods, so there are many different foodborne infections. More than 250 different foodborne diseases have been described. Here is a list of the most common foodborne diseases:

The most commonly recognized foodborne infections are those caused by the bacteria *Campylobacter*, *Salmonella*, and *E. coli* O157:H7, and by a group of viruses called calicivirus, also known as the Norwalk and Norwalk-like viruses.

*Campylobacter* is a bacterial pathogen that causes fever, diarrhea, and abdominal cramps. It is the most commonly identified bacterial cause of diarrheal illness in the world. These bacteria live in the intestines of healthy birds, and most raw poultry meat has *Campylobacter* on it. Eating undercooked chicken or other food that has been contaminated with juices dripping from raw chicken is the most frequent source of this infection.

*Salmonella* is also a bacterium that is widespread in the intestines of birds, reptiles and mammals. It can spread to humans via a variety of different foods of animal origin. The illness it causes, salmonellosis, typically includes fever, diarrhea and abdominal cramps. In persons with poor underlying health or weakened immune systems, it can invade the bloodstream and cause life-threatening infections.

*E. coli* O157:H7 is a bacterial pathogen that has a reservoir in cattle and other similar animals. Human illness typically follows consumption of food or water that has been contaminated with microscopic amounts of cow feces. The illness it causes is often a severe and bloody diarrhea and painful abdominal cramps, without much fever. In 3% to 5% of cases, a complication called hemolytic uremic syndrome (HUS) can occur several weeks after the initial symptoms. This severe complication includes temporary anemia, profuse bleeding, and kidney failure.

*Calicivirus*, or Norwalk-like virus is an extremely common cause of foodborne illness, though it is rarely diagnosed, because the laboratory test is not widely available. It causes an acute gastrointestinal illness, usually with more vomiting than diarrhea, which resolves within two days. Unlike many foodborne pathogens that have animal reservoirs, it is believed that Norwalk-like viruses spread primarily from one infected person to another. Infected kitchen workers can contaminate a salad or sandwich as they prepare it, if they have the virus on their hands. Infected fishermen have contaminated oysters as they harvested them.

Some common diseases are occasionally foodborne, even though they are usually transmitted by other routes. These include infections caused by *Shigella*, hepatitis *A*, and the parasites *Giardia lamblia* and *Cryptosporidia*. Even strep throats have been transmitted occasionally through food.

In addition to disease caused by direct infection, some foodborne diseases are caused by the presence of a toxin in the food that was produced by a microbe in the food. For example, the bacterium *Staphylococcus aureus* can grow in some foods and produce a toxin that causes intense vomiting. The rare but deadly disease botulism occurs when the bacterium *Clostridium botulinum* grows and produces a powerful paralytic toxin in foods. These toxins can produce illness even if the microbes that produced them are no longer there.

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United States Department of Agriculture Food Safety and Inspection Service. Centers for Disease Control, Division of Bacterial and Mycotic Diseases, Disease Information. January 2005.
For more information, visit [www.cdc.gov/ncidod/dbmd/diseaseinfo/foodborneinfections_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/foodborneinfections_g.htm), or call the CDC public response hotline at (888) 246-2675
Fact Sheet #4(b)

Using the "HACCP" Approach for Kitchen Safety

The USDA's Food Safety and Inspection Service (FSIS) established rules for the meat and poultry industries to improve the safety of their products and to better protect the public health. However, consumers must share in the responsibility for safe food and safe food handling. Meat and poultry which are properly handled and cooked at home should be safe.

HACCP focuses on problem prevention. It involves taking a look at processes or food handling practices and identifying critical control points, or steps, where failure to take appropriate action is most likely to result in foodborne illness.

What Does HACCP Mean to the Consumer in the Home?
Recent surveys show that consumers are more aware these days of food safety issues. According to Bessie Berry, Manager of USDA's Meat and Poultry Hotline, "A recent Associated Press poll revealed that 89% of those surveyed said they follow the safety handling instructions on raw meat and poultry products. The safe handling instructions are really part of a HACCP approach which starts in the store and continues in the home." But do consumers really understand what hazards and critical control points are? As in the meat and poultry plants, potential hazards in the home can be divided into three categories:

1. biological (bacteria);
2. chemical (cleaning agents); and
3. physical (equipment).

This focus will be on the biological hazards, or foodborne bacteria, which can lead to illness if the food is mishandled, particularly for those more at risk -- the very young, the elderly and the immuno-compromised.

Certain processes or handling practices by consumers in the home have been identified as being essential or critical in preventing foodborne illness. These practices, which prevent or control the "dinner plate" microbial contamination associated with foodborne illness, are under the direct control of the consumer, from food acquisition through disposal.

They are purchasing, storing, pre-preparation, cooking, serving, and handling leftovers. Failure to take appropriate action at these critical points could result in foodborne illness.

Critical Point 1: Purchasing

- Purchase meat and poultry products last and keep packages of raw meat and poultry separate from other foods, particularly foods that will be eaten without further cooking. Consider using plastic bags to enclose individual packages of raw meat and poultry.
- Make sure meat and poultry products -- whether raw, pre-packaged, or from the deli -- are refrigerated when purchased.
- USDA strongly advises against purchasing fresh, pre-stuffed whole birds.
Manage Resources to Promote Good Health

• Canned goods should be free of dents, cracks or bulging lids.
• Plan to drive directly home from the grocery store. You may want to take a cooler with ice for perishables. Always refrigerate perishable food within 2 hours. Refrigerate within 1 hour when the temperature is above 90 °F.

Critical Point 2: Home Storage

• Verify the temperature of your refrigerator and freezer with an appliance thermometer -- refrigerators should run at 40 °F or below; freezers at 0 °F. Most foodborne bacteria grow slowly at 40 °F, a safe refrigerator temperature. Freezer temperatures of 0 °F stop bacterial growth.
• At home, refrigerate or freeze meat and poultry immediately.
• To prevent raw juices from dripping on other foods in the refrigerator, use plastic bags or place meat and poultry on a plate.
• Wash hands with soap and water for 20 seconds before and after handling any raw meat, poultry, or seafood products.
• Store canned goods in a cool, clean dry place. Avoid extreme heat or cold which can be harmful to canned goods.
• Never store any foods directly under a sink and always keep foods off the floor and separate from cleaning supplies.

Critical Point 3: Pre-Preparation

• The importance of hand washing cannot be overemphasized. This simple practice is the most economical, yet often forgotten way to prevent contamination or cross-contamination.
• Wash hands (gloved or not) with soap and water for 20 seconds: before beginning preparation; after handling raw meat, poultry, seafood or eggs; after touching animals; after using the bathroom; after changing diapers; or after blowing the nose.
• Don't let juices from raw meat, poultry or seafood come in contact with cooked foods or foods that will be eaten raw, such as fruits or salad ingredients.
• Wash hands, counters, equipment, utensils, and cutting boards with soap and water immediately after use. Counters, equipment, utensils and cutting boards can be sanitized with a chlorine solution of 1 teaspoon liquid household bleach per quart of water. Let the solution stand on the board after washing, or follow the instructions on sanitizing products.
• Thaw in the refrigerator, Never On the Counter. It is also safe to thaw in cold water in an airtight plastic wrapper or bag, changing the water every 30 minutes till thawed. Or, thaw in the microwave and cook the product immediately.
• Marinate foods in the refrigerator, Never On the Counter.
• USDA recommends that if you choose to stuff whole poultry, it is critical that you use a meat thermometer to check the internal temperature of the stuffing. The internal temperature in the center of the stuffing should reach 165 °F before removing it from the oven. Lacking a meat thermometer, cook the stuffing outside the bird.

Critical Point 4: Pre-Cooking

• Always cook thoroughly. If harmful bacteria are present, only thorough cooking will destroy them; freezing or rinsing the foods in cold water is not sufficient to
destroy bacteria.

- Use a meat thermometer to determine if your meat or poultry or casserole has reached a safe internal temperature. Check the product in several spots to assure that a safe temperature has been reached and that harmful bacteria like *Salmonella* and certain strains of E. coli have been destroyed.
- Avoid interrupted cooking. Never refrigerate partially cooked products to later finish cooking on the grill or in the oven. Meat and poultry products must be cooked thoroughly the first time and then they may be refrigerated and safely reheated later.
- When microwaving foods, carefully follow manufacturers instructions. Use microwave-safe containers, cover, rotate, and allow for the standing time, which contributes to thorough cooking.

**Critical Point 5: Serving:**

- Wash hands with soap and water before serving or eating food.
- Serve cooked products on clean plates with clean utensils and clean hands. Never put cooked foods on a dish that has held raw products unless the dish is washed with soap and hot water.
- Hold hot foods above 140 °F and cold foods below 40 °F.
- Never leave foods, raw or cooked, at room temperature longer than 2 hours. On a hot day with temperatures above 90 °F, this decreases to 1 hour.

**Critical Point 6: Handling Leftovers:**

- Wash hands before and after handling leftovers. Use clean utensils and surfaces.
- Divide leftovers into small units and store in shallow containers for quick cooling. Refrigerate within 2 hours of cooking.
- Discard anything left out too long.
- Never taste a food to determine if it is safe.
- When reheating leftovers, reheat thoroughly to a temperature of 165 °F or until hot and steamy. Bring soups, sauces and gravies to a rolling boil.
- If in doubt, throw it out.

USDA Food Safety and Inspection Service
July 2002
### Daily Food Plan

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Food Name and Amount</th>
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<td>Beverages</td>
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<td>Comments</td>
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Developing a Meal Plan

Menu
Here is an example of how menus are written. Sometimes you will use every item and sometimes you will use only a few items. For example, you may not always serve an appetizer.

Appetizer
Salad or Soup
Entrée
Side Dish(es)
Beverage(s)
Dessert

Write out your menu for one complete meal.

Recipe References
List the recipe names, cookbooks, and page numbers for menu items that require a recipe.

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<thead>
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<th>Recipe</th>
<th>Cookbook</th>
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## Meal Preparation Schedule

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<td>Organize supplies and ingredients</td>
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Name _____________________________
### Grocery List

**Date ______________________**

**Group ______________________**

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<td>Aluminum Foil</td>
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<td>Plastic Wrap</td>
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Comparing Dry-Heat and Moist-Heat Cooking Techniques
List the correct cooking technique in the appropriate column below. Then name at least three foods that are commonly prepared using that cooking technique. Using two highlighters, highlight foods that are considered lower in fat in one color and foods that are considered higher in fat in another color.

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<th>Dry-Heat Cooking Methods</th>
<th>Moist-Heat Cooking Methods</th>
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<td>2. Cooking Method:</td>
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<td>5. Cooking Method:</td>
<td>10. Cooking Method:</td>
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<tr>
<td>Common Foods Using This Method:</td>
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Managing a Family Food Budget

Develop a one-week menu plan for one family described below. Use grocery ads from the newspaper or online sources to collect the prices for your food choices. Be sure to develop nutritious menu choices, but stay within the budget allowed.

**The James Family.** A family of four with $100 a week to spend on groceries. The family is comprised of a single mom and three small children -- a 4-year-old girl, a 3-year-old boy, and a 4-week-old nursing baby. They follow a vegetarian diet.

**The Martin Family.** A family of four with $175 a week to spend on groceries. Two members of the family are teenaged boys who like having friends over. Mom and Dad enjoy having their children's friends over throughout the week for supper, lunch, or late-night snacks. The younger son was recently diagnosed with lactose intolerance.

**The Michaels Family.** A family of four including a grandmother, father, mother, and 5-year-old daughter. They can spend $110 a week on groceries. Grandma has high cholesterol and is on a diet restricted to low-fat foods. Of course nobody wants to make Grandma feel different, so their meals conform to her diet.

**The Carter Family.** A family of five comprised of a mother, father, 13-year-old twins, and the mother's sister, who is in her first year of college. The family can spend $120 a week on food. The twins' aunt chips in an additional $30 a week for food.

**The Casey Family.** A family of three. The family includes a father and two teenaged sons. Both boys are active in athletics at school. This family has $100 a week to spend on groceries.
Discover Community Resources for Good Health

Unit 2
Discover Community Resources for Good Health

Practical Problem:
How do I learn more about resources in my community that promote good health?

Missouri Family and Consumer Sciences Competencies:
(D-4) Identify programs that provide food assistance, nutrition and wellness services (community/government agencies, health organizations, community parks and recreation.)
(D-5) Discriminate between sources of reliable and unreliable food/nutrition information, products and services.
(D-6) Utilize FCCLA programs to promote nutrition and wellness.

Enabling Objectives for Competency Mastery:
1. Examine EFNEP, WIC, and community programs that provide food assistance to those with limited resources.
2. Examine community programs and resources such as parks, community centers, or other organizations that promote physical activity and fitness.
3. Define criteria used to separate reliable information from biased or unreliable information.
4. Utilize FCCLA programs such as Student Body, Power of One, STAR Events, and Dynamic Leadership to promote nutrition and wellness.

Teacher Background Information

Rationale

Food assistance programs serve one in five Americans, providing nutritious meals, nutrition education and referrals to health care. Programs such as Women, Infants and Children (WIC), the National School Lunch Program, the Expanded Food and Nutrition Education Program (EFNEP), and Food Stamp Program are a few examples of programs that provide children and low-income people access to food, a healthful diet, and nutrition education.

Local organizations such as food banks provide services to local communities. The Central Missouri Food Bank (CMFB) is a regional disaster and hunger relief network that acquires and distributes millions of pounds of donated food annually. CMFB distributes food to people in need through a network of 129 agencies in 31 Missouri counties.
Other community resources that serve families include parks, fitness trails, community centers, and community wellness programs. These services help individuals and families focus on physical fitness, exercise, and wellness.

Learning about federal and community resources is important. However, students also must learn how to separate credible information sources from unreliable, biased sources. That takes critical thinking and practice.

References:

Food and Nutrition Service. FNS increases food security and reduces hunger in partnership with cooperating organizations by providing children and low-income people access to food, a healthful diet, and nutrition education in a manner that supports American agriculture and inspires public confidence. [http://www.fns.usda.gov/fns/](http://www.fns.usda.gov/fns/)

Cooperative State Research, Education, and Extension Service (CSREES) The Expanded Food and Nutrition Education Program (EFNEP) is a unique program that currently operates in all 50 states and in American Samoa, Guam, Micronesia, Northern Marianas, Puerto Rico, and the Virgin Islands. It is designed to assist limited-resource audiences in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets, and to contribute to their personal development and the improvement of the total family diet and nutritional well-being. [http://www.csrees.usda.gov/nea/food/efnep/resources.html](http://www.csrees.usda.gov/nea/food/efnep/resources.html)


Instructional Strategies

1. Examine EFNEP, WIC, and community programs that provide food assistance to those with limited resources. (Competency D-4)
   
   a) Access the USDA Economic Research Service website at [http://www.ers.usda.gov/publications/fanrr26/DBGen.htm](http://www.ers.usda.gov/publications/fanrr26/DBGen.htm) to obtain more information about the role that federal assistance programs play in helping families obtain nutritious meals. Select one of the topics to research. Write a 3-minute radio script to explain the issue you have selected.

   b) Compare the services that each agency in Instructional Strategy 1(a) provides. Create a chart to illustrate which groups are served and what services are provided.

   c) As a class, create a newsletter that features different food assistance programs in the local area. Work individually or in small groups to profile each service or organization, what they provide, to whom, and how to access the services.

2. Examine community programs and resources such as parks, community centers, or other organizations that promote physical activity and fitness. (Competency D-4)
a) Use online sources or the yellow pages of the local phone directory to research community services in your area for wellness or fitness programs. Create a wall chart for the classroom listing all available sources.

b) Invite a guest speaker to class to discuss some of the local resources and how those programs and services promote physical activity and fitness in the community. Possible speakers might come from the Parks and Recreation Service, the local YMCA or YWCA, a community hospital administrator, or a senior citizens center director.

3. Define criteria used to separate reliable information from biased or unreliable information. (Competency D-5)

a) Hand out copies of Fact Sheet #1: 10 Things to Know About Evaluating Medical Resources on the Web. Discuss each topic and give an example of a website you have visited that you would consider a credible source based on this information, and name one website you have visited that does not meet these requirements.

b) Conduct a web search for nutrition supplements. Use Fact Sheet #1: 10 Things to Know About Evaluating Medical Resources on the Web to evaluate the sites you find. Describe the most common characteristics that you notice for credible and questionable sites.

c) Bring in a variety of magazines, top-selling weight loss or fitness books, and other printed materials for nutrition and fitness information. Ask students to review Fact Sheet #2: Critical Evaluation of Resources to determine which printed materials are from credible sources and which materials may lack credibility.

d) Create a bulletin board in the classroom or in a public area of the school. Post examples of reliable information and questionable sources. Include information about how to sort out which information is reliable and which information is suspect.

4. Utilize FCCLA programs such as Student Body, Power of One, STAR Events, and Dynamic Leadership to promote nutrition and wellness. (Competency D-6)

a) Use Fact Sheet #3: Learning About FCCLA to discuss the mission and goals of the organization. Brainstorm a list of ideas about the mission and goals related to nutrition, fitness, and families.

b) Access the FCCLA website to download artwork and information sheets about each of the programs such as Student Body, Power of One, STAR Events, and Dynamic Leadership. Brainstorm a list of ideas that the class could develop into FCCLA projects. Try to include at least one idea for each program.

c) Select one idea from the list created in Instructional Strategy 4(b). Use the FCCLA Planning Process to further develop the project, or divide the class into groups and allow each group to select one idea from the list.
Summative Assessments

Classroom Experiences

1. FCCLA Activity. Identify a local organization that provides nutrition education or food to those in need. Develop an FCCLA project to assist that organization. Use the FCCLA Planning Process and other program materials that may be relevant. (Competencies D-4, D-6)

2. As a class, produce a directory of resources for food assistance programs in your area. Each student should provide at least two national resources and at least five local/regional resources. Compare your lists to eliminate any duplicates. (Competency D-4)
Fact Sheet #1

10 Things to Know About Evaluating Medical Resources on the Web

The number of Websites offering health-related resources grows every day. Many sites provide valuable information, while others may have information that is unreliable or misleading. This short guide contains important questions you should consider as you look for health information online. Answering these questions when you visit a new site will help you evaluate the information you find.

1. Who runs this site?
   Any good health-related Web site should make it easy for you to learn who is responsible for the site and its information. On this site, for example, the National Center for Complementary and Alternative Medicine (NCCAM) is clearly marked on every major page of the site, along with a link to the NCCAM homepage.

2. Who pays for the site?
   It costs money to run a Website. The source of a site’s funding should be clearly stated or readily apparent. For example, Web addresses ending in “.gov” denote a Federal Government-sponsored site. You should know how the site pays for its existence. Does it sell advertising? Is it sponsored by a drug company? The source of funding can affect what content is presented, how the content is presented, and what the site owners want to accomplish on the site.

3. What is the purpose of the site?
   This question is related to who runs and pays for the site. An “About This Site” link appears on many sites; if it’s there, use it. The purpose of the site should be clearly stated and should help you evaluate the trustworthiness of the information.

4. Where does the information come from?
   Many health/medical sites post information collected from other Web sites or sources. If the person or organization in charge of the site did not create the information, the original source should be clearly labeled.

5. What is the basis of the information?
   In addition to identifying who wrote the material you are reading, the site should describe the evidence that the material is based on. Medical facts and figures should have references (such as to articles in medical journals). Also, opinions or advice should be clearly set apart from information that is “evidence-based” (that is, based on research results).

6. How is the information selected?
   Is there an editorial board? Do people with excellent professional and scientific qualifications review the material before it is posted?

7. How current is the information?
   Web sites should be reviewed and updated on a regular basis. It is particularly important that medical information be current. The most recent update or review date
should be clearly posted. Even if the information has not changed, you want to know whether the site owners have reviewed it recently to ensure that it is still valid.

8. How does the site choose links to other sites?
Web sites usually have a policy about how they establish links to other sites. Some medical sites take a conservative approach and don’t link to any other sites. Some link to any site that asks, or pays, for a link. Others only link to sites that have met certain criteria.

9. What information about you does the site collect, and why?
Web sites routinely track the paths visitors take through their sites to determine what pages are being used. However, many health Web sites ask for you to “subscribe” or “become a member.” In some cases, this may be so that they can collect a user fee or select information for you that is relevant to your concerns. In all cases, this will give the site personal information about you.

Any credible health site asking for this kind of information should tell you exactly what they will and will not do with it. Many commercial sites sell “aggregate” (collected) data about their users to other companies—information such as what percentage of their users are women with breast cancer, for example. In some cases they may collect and reuse information that is “personally identifiable,” such as your ZIP code, gender, and birth date. Be certain that you read and understand any privacy policy or similar language on the site, and don’t sign up for anything that you are not sure you fully understand.

10. How does the site manage interactions with visitors?
There should always be a way for you to contact the site owner if you run across problems or have questions or feedback. If the site hosts chat rooms or other online discussion areas, it should tell visitors what the terms of using this service are. Is it moderated? If so, by whom, and why? It is always a good idea to spend time reading the discussion without joining in, so that you feel comfortable with the environment before becoming a participant.

For More Information
NCCAM Clearinghouse
Toll-free in the U.S.: 1–888–644–6226
International: 301–519–3153
E-mail: info@nccam.nih.gov
NCCAM Web site: nccam.nih.gov
Address: NCCAM Clearinghouse, P.O. Box 7923, Gaithersburg, MD 20898–7923

The NCCAM Clearinghouse provides information about CAM and about NCCAM. Services include fact sheets, other publications, and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.
Fact Sheet #2

CRITICAL EVALUATION OF RESOURCES

In the research process you will encounter many types of resources including books, articles and websites. But not everything you find on your topic will be suitable. How do you make sense of what is out there and evaluate its authority and appropriateness for your research?

SUITABILITY

Scope. What is the breadth of the article, book, website or other material? Is it a general work that provides an overview of the topic or is it specifically focused on only one aspect of your topic. Does the breadth of the work match your own expectations? Does the resource cover the right time period that you are interested in?

Audience. Who is the intended audience for this source? Is the material too technical or too clinical? Is it too elementary or basic? You are more likely to retrieve articles written for the appropriate audience if you start off in the right index. For instance, to find resources listing the latest statistics on heart disease you may want to avoid the Medline database which will bring up articles designed for practicing clinicians rather than social science researchers.

Timeliness. When was the source published? If it is a website, when was it last updated? Avoid using undated websites. Library catalogs and periodical indexes always indicate the publication date in the bibliographic citation.

Scholarly vs. Popular

A scholarly journal is generally one that is published by and for experts. In order to be published in a scholarly journal, an article must first go through the peer review process in which a group of widely acknowledged experts in a field reviews it for content, scholarly soundness and academic value. In most cases, articles in scholarly journals present new, previously un-published research. Scholarly sources will almost always include:

- Bibliography and footnotes
- Author's name and academic credentials

Popular magazines range from highly respected publications such as Scientific American and The Atlantic Monthly to general interest newsmagazines like Newsweek and US News & World Report. Articles in these publications tend to be written by staff writers or freelance journalists and are geared towards a general audience. Articles in popular magazines are more likely to be shorter than those in academic journals. While most magazines adhere to editorial standards, articles do not go through a peer review process and rarely contain bibliographic citations.

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http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/
AUTHORITY
Who is the author? What are his or her academic credentials? What else has this author written? Sometimes information about the author is listed somewhere in the article. Other times, you may need to consult another resource to get background information on the author. Sometimes it helps to search the author's name in a general web search engine like Google.

OTHER INDICATORS
Documentation. A bibliography, along with footnotes, indicates that the author has consulted other sources and serves to authenticate the information that he or she is presenting. In websites, expect links or footnotes documenting sources, and referring to additional resources and other viewpoints.

Objectivity. What point of view does the author represent? Is the article an editorial that is trying to argue a position? Is the website sponsored by a company or organization that advocates a certain philosophy? Is the article published in a magazine that has a particular editorial position?

Websites. While most of the strategies listed above for evaluating information can be applied to any type of resource (books, articles or websites), the unfiltered, free-form nature of the Web provides unique challenges in determining a website’s appropriateness as an information source. In evaluating a website, these are some questions that you can ask yourself:

- Is there an author of the document? Can you determine the producer's credentials? If you cannot determine the author of the site, then think twice about using it as a resource.
- Is the site sponsored by a group or organization? If it is sponsored by a group or company, does the group advocate a certain philosophy? Try to find and read "About Us" or similar information.
- Is there any bias evident in the site? Is the site trying to sell you a product? Ask why the page was put on the web?
- Is there a date on the website? Is it sufficiently up-to-date? If there is no date, again, think twice about using it. Undated factual or statistical information should not be used; question where it came from.
- How credible and authentic are the links to other resources? Are the links evaluated or annotated in any way?

For a more detailed checklist of what to look for in a website, see the link Evaluating Web Pages: How and Why at http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Evaluat.html

REFERENCE SOURCES
Book reviews. A book review -- which can appear in a journal, magazine or newspaper -- provides a descriptive, evaluative discussion of a recently published book. Reading how others have evaluated a book may help you decide whether to use that book in your research. There are a number of indexes you can consult that provide references to book reviews:

Used by permission from the UC Berkeley Library Web Internet Guide http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/
LINKS

The Good, The Bad & The Ugly: Or, Why It's a Good Idea to Evaluate Web Sources. From New Mexico State University, this guide includes links to examples of both "good" and "bad" websites.

How to Critically Analyze Information Sources. A quick guide to help you determine the relevance and authority of a resource. A useful companion guide is one titled Distinguishing Scholarly Journals from Other Periodicals. Both from Cornell University.

Evaluating Information Found on the Internet. A thoughtful guide to evaluating web and other Internet resources for scholarly purposes, from John Hopkins University Library.

Evaluation of Information Sources is an extensive list of links to the many other sites available on evaluating information.

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Last update 1/7/2005. Server manager: webman@library.berkeley.edu
Mission

To promote personal growth and leadership development through family and consumer sciences education. Focusing on the multiple roles of family member, wage earner and community leader, members develop skills for life through--

- character development
- creative and critical thinking
- interpersonal communication
- practical knowledge and
- vocational preparation

Purposes

- to provide opportunities for personal development and preparation for adult life
- to strengthen the function of the family as a basic unit of society
- to encourage democracy through cooperative action in the home and community
- to encourage individual and group involvement in helping achieve global cooperation and harmony
- to promote greater understanding between youth and adults
- to provide opportunities for making decisions and for assuming responsibilities.
- to prepare for the multiple roles of men and women in today's society
- to promote family and consumer sciences and related occupations
Unit I
Investigate Key Careers in Nutrition and Wellness

Practical Problem:
How do I identify careers related to nutrition and wellness?

Missouri Family and Consumer Sciences Competencies:
(E-1) Identify career clusters and careers related to nutrition and wellness.
(E-2) Research jobs and careers related to nutrition and wellness.
(E-3) Examine ethical issues and work-related responsibilities.

Enabling Objectives for Competency Mastery:
1. Review career clusters and identify those that relate to nutrition and wellness.
2. Gather information on careers related to foods and nutrition.
3. Gather information on careers related to health, fitness, and wellness.
4. Explore ethical issues in the work-place.
5. Describe work-place responsibilities.

Teacher Background Information

Rationale

While many aspects of nutrition and wellness relate to personal health, many career and technical jobs are available in these fields. Increasing interest in a healthful lifestyle, new technology, current research, and access to health care all contribute to job growth. The Career Paths/Career Clusters concept is intended to give all students the academic preparation, guidance, career-related knowledge, and flexibility to help them plan studies that are in line with their interests, abilities, and career goals.

Background

The Career Paths/Career Clusters framework supports the schools' need for academic accountability and improved achievement for all students. At the same time, the Career Paths/Career Clusters allow family and consumer sciences teachers to help students explore many aspects of the health, nutrition, fitness, and food industries where increasing employment opportunities are available.

New jobs and career paths emerge every few months or years. It is not possible to prepare students new for the possibilities that lie ahead. Students need basic workplace skills that can be adapted to many changing work places.
Investigate Key Careers

Entry level jobs allow inexperienced workers to learn on the job. Many jobs require specialized training and may not be available to students without some advanced preparation. Other jobs require higher education, certification, or credentials. Through planning, evaluation and goal-setting students can explore the world of work.

Career Communications, Inc. has developed American Careers student publications and Teaching Guides to integrate academic and career development objectives. Student activities are contextual, respond to the needs of diverse learners and meet state standards and national counseling and career development guidelines. Information about these resources is available online at http://www.carcom.com/

References:


Family, Career, and Community Leaders of America (FCCLA). Career Connection. CD-ROM


Instructional Strategies

1. Review career clusters and identify those that relate to nutrition and wellness. (Competency E-1)

   a. Print out a copy of the Missouri Career Cluster poster at http://dese.mo.gov/divcareered/career_clusters.htm and post for review. Brainstorm a list of careers related to nutrition, food, science, fitness, and health, or wellness.

Questions for Discussion/Formative Assessment

- Is it possible to pursue a career in any of the cluster areas that relate to one of these topics?
- Why do you think the clusters are organized the way they are?
- List some of the skills or strengths people in each cluster might have?
- Do you feel you are more interested one cluster, or are there several that appeal to you?
Teacher Note: http://www.careerclusters.org/ is the website for the information on Career Clusters. You will find descriptions for all 16 career clusters with links to sample plans of study.

b. Use the K-W-L-M technique to tap into your prior knowledge of career clusters. Connect that knowledge to new information related to nutrition, food science, fitness and health, or wellness. Draw the K-W-L-M grid on an overhead transparency or large sheet of poster paper. Brainstorm facts you know about career cluster from previous classes. Develop a set of questions you want to discover more about regarding career opportunities in food service, health care, technology, fitness, nutrition, or other helping professions. Save the work on the chart and add details and descriptions to the Learned column as you work through this unit. Near the end of the unit you will fill in the last two columns of the grid with information that you learned and resources to consult for further information.

Teacher Note: Example for KWLM

<table>
<thead>
<tr>
<th>What do we know</th>
<th>What we want to discover</th>
<th>What we learned</th>
<th>How can we learn more</th>
</tr>
</thead>
<tbody>
<tr>
<td>List facts</td>
<td>Pose questions</td>
<td>Details and Descriptions</td>
<td>Actions or activities</td>
</tr>
<tr>
<td>16 Actual Career Clusters</td>
<td>How much training is needed</td>
<td>Dietitian starting salary</td>
<td>Occup. Outlook Handbook</td>
</tr>
</tbody>
</table>

c. Use Activity Sheet #1(a) and 2(b): **Career Paths For Anyone Interested in Nutrition and Wellness** to identify which career paths lead to jobs in the nutrition and wellness fields. Using the list of job titles, sort the titles and list them in columns under the Career Path that you think is the best fit. Then divide into six groups to investigate each Career Path. Each group will choose one Career Path to examine. Compare the job titles on your sheet to the description in the Occupational Outlook Handbook (See Reference section in this unit.). Are there some titles that you think should be moved to different column after further investigation?

2. Gather information on career related to foods and nutrition. (Competencies E-1, E-2)

a. Invite the food service supervisor or dietitian from your school district to talk about these careers. Take a tour of your school’s food service area. Point out the variety of jobs that are needed for this food service operation.

**Questions for Discussion/Formative Assessment**

- *What types of skills are needed for these jobs?*
- *How much training and education are needed for these jobs?*
- *What is the job market like? Are jobs easy to find or difficult?*

b. Organize a field trip to a local restaurant. Select one job to explore and report on after the field trip. Ask the appropriate questions during the tour to be able to write a 2-3 paragraph position description for the job you have investigated.
c. Use classroom, library or Internet resources to research more about the position you chose in Instructional Strategy 2(b) above. Research the training or education needed for the position, the average starting salary for the position, and other employment facts about the job. Write a one paragraph summary of your findings.

d. FCCLA Activity. Use the Career Connection CD-ROM to complete the “Career Scan” to identify how your previous experiences prepare you for a career in the nutrition, health, or wellness areas.

3. Gather information on careers related to health, fitness, and wellness. (Competencies E-1, E-2)

a. Interview a person in your community whose job is related to personal health, fitness, or wellness. For example, you might interview someone who is a counselor in a weight-loss center, a dietitian, an athletic trainer, a community educator with the Cooperative Extension Service, or a coach. Choose a type of career that interests you. Interview the person about their education and training for their job, explore the work they do each day, ask about professional organizations or trade associations that support their industry, etc.

b. Sponsor a career fair at your school. Invite local professionals to set up a table with information about their companies and their careers. They may want to bring in equipment, posters, brochures, or other items to show that helps describe their work. You might also include tables for cholesterol screening, blood pressure checks, etc.

c. Tour a local hospital or health care facility that offers a wellness program. Explore the areas that are related to health, fitness and wellness.

Questions for Discussion/Formative Assessment
- How many different jobs are needed to operate a restaurant?
- Is this a growing or shrinking industry in your community?
- What skills are needed for each of the positions?
- How many hours do employees work on average?
- What personality traits and abilities are needed for success in this industry?
- What professional organizations are available for someone wanting to learn more?
- How do people get started in this industry?

- How many different jobs did you learn about?
- What levels of training or education are needed for each job?
- Which jobs focus on keeping healthy people healthy? Which jobs focus on helping people overcome health problems?
4. Explore ethical issues in the work-place. (Competency E-3)

   a. Work individually to complete Activity Sheet #2: Dependability in the Workplace to explore many issues that reflect an employee’s attitude and workplace performance. Divide into small groups to discuss how you would feel if you worked with someone who displayed each of the behaviors described.

   b. Fill in the blanks on Activity Sheet #3: Attitudes for Job Situations to examine positive and negative attitudes and how your attitude affects your co-workers.

5. Describe work-place responsibilities. (Competency E-3)

   a. Divide the class into teams. Challenge students to imagine they have developed a new food product. They want to start their own business to produce and market this new food product. Each team needs to select the president of their company and decide on their new product. They then need to determine the other positions they will need in their company such as a marketing director or food scientist. Allow time for each “company” to advertise to the whole class. Use the FDA website to help think of legal issues and other issues necessary to obtain permits, inspections, etc. http://www.cfsan.fda.gov/~comm/foodbiz.html

   b. Work-place safety is an important responsibility all employees share. Visit the Youth Rules website sponsored by the U.S. Department of Labor at http://www.osha.gov/SLTC/youth/restaurant/index.html to explore some of the safety concerns for teens working in the food service industry.

   c. Review Fact Sheet #1: Career Connections to learn more about this FCCLA program that focuses on different aspects of career development. There are six different areas of career exploration that you may choose to pursue.

Questions for Discussion/Formative Assessment

   - How are the companies you created alike and different?
   - What jobs are needed in every company? What jobs are unique among the companies?
   - Where would you go first to start your company?
Summative Assessments

Paper and Pencil

1. Research a job that interests you in the area of nutrition, health, or fitness. Write your own career statement or goal statement that you would use on a resume to apply for that position. (Competencies E-1, E-2)

2. Using the information from your interview in Instructional Strategy 3(a), write a summary report describing the person you interviewed and what you learned about his or her job. Be sure to include a description of the person’s job and explain why this job would or would not appeal to you as a career option. (Competency E-2)

Classroom Experiences

1. FCCLA Activity. Develop an Illustrated Talk to present information about appropriate work-place behaviors and ethical issues. Use technology to support your presentation. (Competency E-3)
Career Connection
1910 Association Drive, Reston, VA 20191 – (703) 476-4900 – (703) 860-2713 Fax – www.fcclainc.org

Career Connection:
Career Connection is a national FCCLA program that guides young people to link their options and skills for success in careers, families, and communities. Through individuals, cooperative and competitive activities, members –

- Discover their strengths
- Target career goals
- Initiate a plan for achieving the lifestyle they desire

Career Connection Topic Areas:
Six units focus students’ activities on different aspects of career development. Students can choose a unit, then plan and carry out related projects that strengthen their awareness of skills needed for careers. Each unit includes information, related activity ideas, at least 14 specific project suggestions, three or four reproducible project tools, and more.

1. PLUG IN to Careers
Understand Work and Career Connection Program
2. SIGN ON to the Career Connection
Link Personal interests, skills, and goals to career clusters
3. PROGRAM Career Steps
Prepare with education, leadership, and work experiences
4. LINK UP to jobs. Learn to find and land a job.
5. ACCESS SKILLS for Career Success. Practice being productive.

Career Connection CD-ROM:
The Career Connection and Leaders at Work CD-ROM provides everything students need to make the Career Connection, including –

- a “Career Scan” to help students identify and analyze previous career-related experiences
- dozens of ideas for simple, short-term student activities
- more than 90 suggestions for individual, cooperative, and competitive student projects
- insight from FCCLA alumni and family-friendly employers
- two reproducible tool sheets to use with projects and activities

For more information on the FCCLA Career Connection program and the Career Connection and Leaders at Work CD-Rom, log onto the FCCLA Web site, www.fcclainc.org. Contact your local FCCLA chapter to find out how to make a Career Connection through FCCLA.

Awards:
Family, Career and Community Leaders of America offers national recognition to chapters and members that complete FCCLA Career Connection projects. This honor includes cash awards and special recognition for their hard work and innovative projects in the National Programs Award Application available on the FCCLA Web site, www.fcclainc.org.

Awards: Middle School Award - $1,000
High School Award – $1,000
Runner – Up Award - $500
Deadline: Award applications due to FCCLA national headquarters postmarked by March 1.
Career Paths for Anyone Interested in Nutrition and Wellness

Using the list of occupations below, write the name of the occupation under the column on the next page that you believe is the best match for the career path related to that occupation. For example, what career path do you think a Personal Trainer would fall under: Business, Management and Technology, Human Services, Arts and Communication, Health Services, Industrial and Engineering Technology, or Natural Resources and Agriculture? Sort all of the job titles below into the appropriate career path column.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Career Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Trainer</td>
<td>Clinical Dietitian</td>
</tr>
<tr>
<td>Weight Counselor</td>
<td>Sanitarian</td>
</tr>
<tr>
<td>Community Recreation Director</td>
<td>Marketing Director</td>
</tr>
<tr>
<td>Wellness Specialist</td>
<td>Product Research and Development</td>
</tr>
<tr>
<td>Employee Assistance Advisor</td>
<td>Public Health Educator</td>
</tr>
<tr>
<td>Food Technician</td>
<td>Dietary Aide</td>
</tr>
<tr>
<td>Food Inspector</td>
<td>Community Health Nurse</td>
</tr>
<tr>
<td>Food Scientist</td>
<td>Food Sales Manager</td>
</tr>
<tr>
<td>Food Science Technician</td>
<td>Assistant Banquet Manager</td>
</tr>
<tr>
<td>Lab Technician</td>
<td>Chef</td>
</tr>
<tr>
<td>Catering Director</td>
<td>Home Health Aide</td>
</tr>
<tr>
<td>Owner</td>
<td>Cook</td>
</tr>
<tr>
<td>Food Court Coordinator</td>
<td>Nutrition/Health Educator</td>
</tr>
<tr>
<td>Assistant Art Director</td>
<td></td>
</tr>
<tr>
<td>Food Stylist</td>
<td></td>
</tr>
<tr>
<td>Food Editor</td>
<td></td>
</tr>
<tr>
<td>Test Kitchen Manager</td>
<td></td>
</tr>
<tr>
<td>Food Bank Director</td>
<td></td>
</tr>
<tr>
<td>Meals on Wheels Director</td>
<td></td>
</tr>
</tbody>
</table>
## Career Paths for Anyone Interested in Nutrition and Wellness

<table>
<thead>
<tr>
<th>Career Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resources Agriculture</td>
</tr>
<tr>
<td>Industrial and Engineering Technology</td>
</tr>
<tr>
<td>Health Services</td>
</tr>
<tr>
<td>Arts and Communication</td>
</tr>
<tr>
<td>Human Services</td>
</tr>
<tr>
<td>Business, Management and Technology</td>
</tr>
</tbody>
</table>
## Dependability in the Workplace

Place an X in the column to indicate the dependability of the worker described in each statement.

<table>
<thead>
<tr>
<th></th>
<th>Dependable</th>
<th>Not Dependable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This worker is at work on time every day.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. This worker comes back from breaks late once in awhile.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. This worker sits down when he gets tired; he just does his work when he feels like it.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. This worker makes a commitment to do a job and then does it.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. This worker makes phone calls during the working day instead of doing her work.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. The workers make medical and other personal appointments after work hours.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. This worker promises to cover a co-workers shift and then at this last minute decides not to work.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. This worker looks around for more work to do when one task is finished.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. This worker calls in sick whenever he just wants the day off.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. This worker tries—even when the job seems too difficult.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. This worker keeps her work area neat and organized.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. This worker writes down her supervisor's instructions and asks questions when they are not clear.</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Investigate Key Careers

Competency E-3
Name______________________________
Activity Sheet #3

Attitudes for Job Situations

The following statements represent positive and negative attitudes. Under each statement, indicate (1) whether it represents a positive or negative attitude, (2) who is affected, (3) the expected outcome, and (4) a suggestion for an alternative action.

Example: “It is time to stop my work for my break, but I know this filing needs to be finished this morning, I will finish filing and then take my break.”

Attitude: Positive
Who is Affected: Co-workers or supervisor who needs to use those files
Expected Outcome: Employee is thought to be responsible and reliable
Alternate action: “It is my break time; I will finish this when I get back.”

1. OH! I overslept, I will call the office to let someone know that I am running late and will be there soon.

   Attitude: ___________________________________________________________
   Who is Affected: ____________________________________________________
   Expected Outcome: __________________________________________________
   Alternate Action: ____________________________________________________

2. Nobody at the office like Keri. I guess I don’t like her either. It may be that I have not tried to get to know her. I will start being friendly to her this afternoon.

   Attitude: ___________________________________________________________
   Who is Affected: ____________________________________________________
   Expected Outcome: __________________________________________________
   Alternate Action: ____________________________________________________

3. I need pencils and 3-ring binders for school. I will take some from the office supply cabinet. There are plenty of extras stored there and they don’t really belong to anyone at work.

   Attitude: ___________________________________________________________
   Who is Affected: ____________________________________________________
   Expected Outcome: __________________________________________________
   Alternate Action: ____________________________________________________
4. Ms. Carlson told me to do this task step-by-step until I learn the routine, but this shortcut will save time. I know she won’t mind if I finish quickly and move on to something else.

   Attitude: _____________________________________________________________

   Who is Affected: ______________________________________________________

   Expected Outcome: ____________________________________________________

   Alternate Action: _____________________________________________________

5. I need to make an appointment for my dental checkup. I will try to schedule the appointment early in the afternoon and then just take the rest of the day off. It wouldn’t make sense to come back to work for just an hour or so.

   Attitude: _____________________________________________________________

   Who is Affected: ______________________________________________________

   Expected Outcome: ____________________________________________________

   Alternate Action: _____________________________________________________

6. I want to come in a few minutes early tomorrow so that I can organize my desk area before everyone else arrives and the phones begin ringing. It will go faster if I don’t have other interruptions.

   Attitude: _____________________________________________________________

   Who is Affected: ______________________________________________________

   Expected Outcome: ____________________________________________________

   Alternate Action: _____________________________________________________

7. I was just making photocopies and I overheard Dylan tell Chris that he thinks Mr. Tyler is going to fire Liz this afternoon because Dylan found a memo about it in the copy machine. Did you know about it?

   Attitude: _____________________________________________________________

   Who is Affected: ______________________________________________________

   Expected Outcome: ____________________________________________________

   Alternate Action: _____________________________________________________
8. Joi asked if I would take her shift on Saturday because her mother is visiting from out-of-town. I don’t have plans, but I told Joi that I did because I don’t want to work her shift. I know she covered for me last month when I was sick, but that’s different because I didn’t plan to be sick.

**Attitude:**

**Who is Affected:**

**Expected Outcome:**

**Alternate Action:**