

INFLUENCES ON NUTRITIONAL PRACTICES AND WELLNESS ACROSS THE LIFESPAN

Psychological, Cultural and Social Influences on Food Choices

Lesson Grade Levels: 7-12

Concept: Food Security and Hunger

Comprehensive Standard: 6.1 Analyze the factors that influence nutritional practices and wellness across the lifespan

Technical Standard(s):

6.1.2 Explore the societal, governmental, socio-economic, and technological influences related to food choices and practices

6.1.3 Examine the impact of food choices on the global community

LESSON COMPETENCIES:

- Define food security, food insecurity, hunger and other related terms (MS,HS)
- Identify possible causes of food insecurity and hunger (MS, HS)
- Examine issues related to food insecurity and hunger (HS)
- Explore meal planning for families below the poverty level (HS)
- Discuss possible solutions to the problem of domestic and world hunger (MS, HS)

Anticipated Behavioral Outcomes:

- Students develop an awareness of domestic and global issues related to hunger and poverty.
- Students research some of the many factors that contribute to food insecurity and hunger in the United States and around the world.
- Students take action in their local communities to address these concerns.

Resources Needed:

- Calculators
- Food ads from local grocery stores
- Copies of handouts for all students
- Copies of the “Food Stamp Eligibility” limits available at http://www.frac.org/html/federal_food_programs/programs/fsp.html

References for teachers and students **NEW websites added:**

Federal poverty guidelines are updated each year and can be found at <http://aspe.hhs.gov/search/poverty/index.shtml#latest>.

For information on “Food Stamp Eligibility” limits and other Federal Food Assistance programs as well as a reproducible fact sheet on “Hunger in America”, see the *Food Research Action Council* site <http://www.frac.org>.

A pamphlet outlining the food stamp program *Facts About the Food Stamp Program* and how to order hard copies of the pamphlet can be found at <http://www.fns.usda.gov/fsp>.

NEW - *The World Food Programme* (WFP) (www.wfp.org/english) is the world's largest international food aid organization combating hunger in underdeveloped nations with severe food shortages. The frontline stretches from sub-Saharan Africa and the Middle East to Latin America and Asia and the Pacific. WFP is the food aid arm of the United Nations system. This site is an excellent source of information on world hunger. There is an interactive map of world hunger and a downloadable game (http://www.food-force.com/index.php/reality/wfp_site/). Food Force is an educational video game telling the story of a hunger crisis on the fictitious island of Sheylan. It is comprised of 6 mini-games or “missions”, the game takes young players from an initial crisis assessment through to delivery and distribution of food aid, with each sequential mission addressing a particular aspect of this challenging process.

America's Second Harvest (<http://www.secondharvest.org/>). This Nation's Food Bank Network is the nation's largest charitable hunger-relief organization.

Facing the Future (<http://facingthefuture.org/>) develops young people's capacity and commitment to create thriving, sustainable, and peaceful local and global communities. Sample lessons are available for download and an entire curriculum can be ordered for a minimal charge.

Feeding Minds, Fighting Hunger (<http://www.feedingminds.org>). This project was initiated by a group of international and non-governmental organizations that have joined forces to help eradicate hunger and malnutrition through education. A free curriculum of the same name is available for primary, intermediate and secondary students.

Food For Everyone (<http://www.agedhq.org/ffe/index.html>). This site offers a free curriculum on hunger focused on the agriculture industry.

Food for the Hungry (<http://www.fh.org/>) is working in over 47 countries providing relief, and implementing development programs to transform communities physically and spiritually

Founded in 1946, *Freedom from Hunger* is a nonprofit, international development organization that brings innovative and sustainable self-help solutions to the fight against chronic hunger and poverty (<http://www.freefromhunger.org/>).

Across the globe, *Heifer International* (<http://www.heifer.org/>) donors, volunteers, staff and project partners strive daily to build communities, distribute resources fairly, improve access to education and preserve our environment.

<http://nutrition.tufts.edu/academic/hungerweb/>, *Hunger Web*, is for researchers, educators, policy influencers, operations personnel, other professionals and students using the Internet to help find solutions to hunger at the global, national, community and household level—or for anyone who is interested in learning more about the subject.

The *Hunger Project* (<http://www.thp.org/>) is a strategic organization and global movement committed to the sustainable end of chronic hunger--the silent killer that takes the lives of 20,000 of our fellow human beings every day.

Know Hunger (<http://www.knowhunger.org>). This site has a free curriculum on hunger in American and around the world.

The *National Student Campaign Against Hunger and Homelessness* (<http://www.studentsagainsthunger.org/>) is committed to ending hunger and homelessness in America by educating, engaging, and training students to directly meet

individual's immediate needs while advocating for long-term systemic solutions.

<http://www.feedingchildrenbetter.org/index.jsp> Corporate responsibility has always been a *ConAgra Foods* priority. Through *ConAgra Foods Feeding Children Better Foundation* program, the company has focused its long history of giving and channeled it to make a deep and lasting impact on an issue that is important to its consumers, employees, customers and communities--child hunger.

<http://www.unicef.org/> The home page for *UNICEF*.

<http://hungerrelieforganizations.atspace.com/> This web site provides a rich source of links to the most highly respected and frequently used hunger relief organizations. They also provide world hunger statistics which characterize the extent of the problem.

Background Information:

Updated The world's population is currently around 6 billion people and is expected to climb to 8 billion people by 2025 (<http://www.census.gov/ipc/www/idb/>). Consider the following information from the United Nations briefing report on Poverty (2001). For the entire report, visit the website <http://www0.un.org/cyberschoolbus/briefing/poverty/pvoverview.htm>.

Facts on World Hunger:

- More than 2.8 billion people, close to half the world's population, live on less than the equivalent of \$2/day.
- More than ½ billion people or about 20% of the world's population, live on less than the equivalent of \$1/day.
- Nearly 1 billion people are illiterate
- More than 1 billion people do not have access to safe water
- The top fifth (20%) of the world's population has access to 86% of the world's wealth. The bottom fifth, in the poorest countries, has about one percent.

Facts on Hunger in America:

Updated A 2005 study by *Second Harvest* entitled *Hunger in America 2005* (<http://www.secondharvest.org>) found the following:

- In 2005, about 37 million people (12.6% of the population) in the U.S. were in poverty; 7.7 million families were in poverty; 12.9 million (17.8%) children under the age of 18 were in poverty; 3.6 million (10.1%) of seniors 65 and older were in poverty.
- *America's Second Harvest Network* provided emergency food assistance to an estimated 25 million low-income people.
- Nearly half (42.6%) of all emergency food recipients lived in rural or suburban areas of the country NOT cities.

NOTE to TEACHER: Another excellent fact sheet called *Hunger Facts* can be found at the *Kids Can Make a Difference* website (<http://www.kidscanmakeadifference.org/hunfa.htm>). A teacher's guide, *Finding Solutions to Hunger: Kids Can Make a Difference*, and 25 lessons on hunger and poverty curriculum can also be ordered at this site.

Food Insecurity - Most American families are “food secure” – they have assured access, at all times, to enough food for an active, healthy lifestyle. But many families in the United States (about 11% in 2005 according to the *Hunger In America* study completed by Second Harvest) and around the world are “food insecure” – they are uncertain of having or unable to acquire, adequate food sufficient to meet this basic need at all times due to inadequate household resources for food. This might be due to low wages, unstable employment or unemployment, or drought and famine.

WORLD FOOD DAY – *World Food Day* is celebrated every year on October 16 as an effort of the *Food and Agriculture Organization* (FAO) of the *United Nations* to raise public awareness of the world’s hungry and malnourished and to encourage people to take action against hunger. This unit could be introduced at that time and/or school activities could be planned that focus on domestic and global issues related to food insecurity and hunger.

Learning Activities:

Middle School Level

- Review terms related to hunger and food insecurity. Use the transparency master, [*Terms to Know*](#). Discuss the following questions:

Hunger –

- How many of you have ever been hungry?
- How did it feel to be hungry?
- How long was it before you were able to get some food to satisfy your hunger?
- How would it feel to eat one meal a day – a bowl of rice and some water?
- How many days could you survive?
- How would this impact your work at school, your activities, and your family?

Food Security/ Food Insecurity

- Do you think all families in the United States are food secure?
- Do you think all families in South Dakota are food secure?
- Do you think all families in our community are food secure at all times?
- How would you know if a family was struggling with having enough food? (Show pictures of children and adults and ask if you could recognize those who are not getting enough food)
- What do families do if they do not have enough food?
 - * go to a food pantry
 - * go to a soup kitchen
 - * go hungry or adults eat less so that children can have more to eat
- What resources does South Dakota have to help these families?
 - * Food Stamps program

- * food pantries
- * *Women, Infant and Children* program
- * *The Banquet* (Sioux Falls) or other food kitchens
- * reduced school lunches and/or breakfast programs
- What do you think are socially unacceptable forms of getting food in our community?
 - * begging
 - * going through garbage
 - * going to a food pantry?
 - * accepting charity?
 - * going to a food/soup kitchen
 - * stealing
 - * accepting food stamps?
 - * other
- Why might some people not seek help if they do not have enough food for their families?
 - * pride
 - * not aware of help
 - * other

Malnutrition

- What are the signs of malnutrition?
- Are only low income families malnourished?
- How could someone be getting enough food and still be malnourished?
- Using the transparency master, review the [*Health Consequences of Hunger*](#)
- Complete the activity [*Thanksgiving Shopping Cart*](#). Ask students to calculate the cost of the average Thanksgiving dinner in the United States. Provide food ads from the local newspaper for students. Read the article [*“Less Than \\$1 Means a Family of 6 Can Eat”*](#) available from *The Washington Post* at <http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&node=&contentId=A30110-2002Feb18> Calculate how many days income for families living in third world countries are included in the cost of this one meal in the United States. Plan a Thanksgiving dinner for a low-income family.
- Complete the activity [*Relying on Rice*](#). Discuss what countries rely on rice as the primary staple food.
 - NOTE TO TEACHER:** To increase the effectiveness of this activity, prepare a bowl of brown rice to show students what a one cup serving of brown rice would look like.
- Use the FCCLA Planning Process to plan a project related to hunger and food insecurity. See suggestions listed in the Extended Activities section of this unit.

High School Level

- Prepare the [*World Continents Game*](#) activity. Hand out tickets as students enter the room. Follow directions as outlined on the activity sheet.

- Students complete the pre-test/ [Understanding Poverty](#). Discuss responses and provide students with correct answers. An additional quiz on Global Issues related to poverty (click on global issues trivia) can be found at <http://www.facingthefuturedata.org/download.htm>
- Review terms related to hunger and food insecurity. Use the transparency master, [Terms to Know](#) and [Health Consequences of Hunger](#). Ask similar questions to those for middle school age group.
- Complete the [Meal Planning on a Limited Income](#) activity. Using the federal poverty guidelines available (see first item in reference/resource list) at and [MyPyramid](#) for members of a case family, plan one week's menus for individuals and families that are nutritionally adequate for family members and are within budgetary limits.
- **NEW** Research the poorest counties in the United States: How many are in South Dakota? What factors contribute to poverty in our state?

Extended Activities:

- **[Feast or Famine?](#)** The directions for this activity are included. This activity could be completed by members of the class or by FCCLA members. It is very effective when completed close to the Thanksgiving holiday. It could be included as part of National Family Week/Month activities.
- **[Food Drive](#)** – FCCLA chapter hold a food drive to collect food items for the local food pantry or some other organization collecting food for those in need. Cans of food can be used for a reduction in admission price for a sporting event or other school event.
- **[Community Sharing: Gleaning](#)** – This activity is a community wide event to glean fruits and/or vegetables left in fields, gardens and orchards after harvest.

Terms to Know

Hunger

Food Security

Food Insecurity

Malnutrition

Starvation

Terms to Know

Hunger – the uneasy or painful sensation caused by a lack of food. The recurrent and involuntary lack of access to food. (Life Sciences Research Office)

Food Security – Access by all people at all times to enough food for an active, healthy lifestyle. Food security includes at a minimum: (1) the ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (Life Sciences Research Office)

Food Insecurity – Limited or uncertain availability of nutritionally adequate and safe or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (Life Sciences Research Office)

Malnutrition – a general term that indicates a lack of some or all nutritional elements necessary for health (Medline Plus Medical Encyclopedia)

Starvation – the most severe type of nutritional inadequacy resulting from a lack of food needed

Health Consequences of Hunger

- **Hungry children suffer from more health problems**
 - **unwanted weight loss**
 - **fatigue**
 - **headaches**
 - **irritability**
 - **inability to concentrate**
 - **frequent colds**
- **Hungry children are more likely to be ill and absent from school**
- **Stunting (low height for age)**
- **Iron-deficiency anemia in children can lead to developmental and behavioral problems**
- **Pregnant women who are malnourished are more likely to have low birth weight babies**

Thanksgiving Shopping Cart

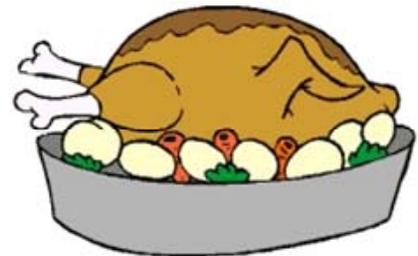
Name(s) _____

Directions: Most American families prepare a bountiful Thanksgiving dinner. Calculate the amount spent on an average Thanksgiving dinner (for 10 people) in your community by finding the prices for each of the items in the “shopping cart” list.

Shopping Cart Item	Cost
16 pound turkey	
14-oz. package of cubed stuffing	
1 gallon 2% milk	
3 lbs. sweet potatoes	
12-oz. package of brown-and-serve rolls	
8-oz. carton of whipping cream	
1 bunch celery	
1 lb. carrots	
30-oz. can pumpkin pie filling	
12-oz. package of fresh cranberries	
Package of 2 nine-inch pie shells	
16-oz. package of frozen green peas	
Combined group of miscellaneous items (including coffee and other ingredients to prepare the meal)	\$ 3.50
TOTAL COST	

Since 1.3 billion people live on less than \$1 per day, how many days income would be covered by this meal alone?

What can you do to help?



Relying on Rice

Name(s) _____

Directions: Rice is the staple for much of the world's population. Does rice provide all of the nutrients we need? Using the nutrient charts provided by your teacher, complete the following chart indicating which nutrients are found in brown rice. When you have completed the chart, answer the questions found below.

Dietary Analysis of Rice (list for a 1 cup serving)

Nutrient	Recommended Amount	% of Recommended Daily Value that this amount provides
Calories		
Protein (g)		
Fat (g)		
Fiber (g)		
Carbohydrates (g)		
Calcium (mg)		
Iron (mg)		
Niacin (mg)		
Thiamin (mg)		
Riboflavin (mg)		
Vitamin A (IU)		
Vitamin C (mg)		
Vitamin D (mg)		
Cholesterol (mg)		

If a child's diet consisted of a bowl of rice along with a cup of water twice a day,

1. What nutrients would the child be lacking completely?

2. What nutrients does the child get but not at 100% of the recommended amount?

World Continents Game*

Data updated with most recent available from United Nations, 2000

Format: This activity works best with a minimum of 20 people.

Objectives:

- recognize how people and resources are distributed throughout the world
- discuss the problem of world hunger and explore possible solutions

Procedure:

1. Make tickets and divide up small pieces of candy or use grain such as kernels of corn for participants. Use the following table to determine how many tickets and pieces of candy or kernels of corn to assign each “continent.” For example, if you have 20 people and 100 pieces of candy or corn, make 4 “Africa and Middle East” tickets, and allocate 3 pieces of candy or corn for that continent. If you have a different number of people or amount of candy/corn, use the percentages in the table to calculate the numbers for your situation.

Continent	% of world total	# people for a group of 20	# people for a group of 30	% of world total income/wealth	# candies/corn out of 100 pieces
Africa and the Middle East	11	2	3	2	2
Asia	60	12	18	30	30
Latin America and the Caribbean	8	2	3	4	4
North America (United States and Canada)	6	1	2	34	34
Europe and other industrialized countries	15	3	4	30	30
TOTAL	100%	20	30	100%	100

2. Have each participant draw a ticket assigning them to a continent, and have them go to an area of the room designated for that continent. To increase the drama, be creative in setting up the room. For example, have people assigned to North American sit at one table, those in Europe at another, while people assigned to Latin America and the Caribbean sit on a rug or pillows; those in Africa and the Middle East and Asia, sit on the floor in a small crowded place. Keep the continent groups separate to make it easier to have group discussions later.

Meal Planning on a Limited Income

Name(s) _____

Directions: Plan one week's menu for your assigned family following the budget you have been assigned and meeting the daily guidelines of MyPyramid.

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Feast or Famine?

1. Invite guests to a meal. As the guests enter the room, have each person write his/her name on a slip of paper and place in a basket.
2. Once everyone has arrived, announce where guests will be seated:
 - a. 3% are from “developed” countries; these guests sit at a table which is elegantly set with tablecloth or placemats, napkins, a centerpiece, candles, fine dinnerware and silverware.
 - b. 17% of guests are from “developing” countries. These guests have chairs to sit on but the table is not set at all. They have paper plates and a spoon.
 - c. 70% of guests are from “third world” countries. These guests are asked to sit on the floor off in a corner of the room.
3. Meals are then provided for each group:
 - a. This group gets a 3-4 course meal that is served to them by waiters or waitresses. It should include a salad, a meat entrée with two or more side dishes, bread, butter or margarine, milk and dessert.
 - b. This group receives a vegetable dish of some sort, bread and milk. It is not served to them but placed in the middle of the table.
 - c. This group receives a large bowl of rice (only about ½ cup per person). They have no silverware and no plates/bowls; they should eat from the large bowl with their fingers. If they do receive water to drink, it should be dirty. If desired, members of this group can be allowed to “beg” for food from the other groups.
4. To add to the effectiveness of this activity, the leaders of the event can ring a bell every few minutes and announce how many people in the world have died of starvation in the time that has past. (The United Nations, 2002, states that 1 person dies of malnutrition or starvation every four seconds).