Concept Attainment Lesson Plan

Course:	**Foods for Life**	**Unit:**	**Nutrition**
Lesson:	**Consumer Agency**	**Practical Problem:**	**How do I gain information on how to select food products for my family?**

Objectives:

1) Differentiate between sources of nutrition information (Cognitive / Comprehension)
2) Distinguish between the government agencies involved in regulation of food products and advertisement (Cognitive / Analysis)
3) Evaluate local, state, and federal inspection and labeling systems that protect the health of individuals and the public (Cognitive / Evaluation)

Introduction or Approach (3-5 min.):

Someone please raise your hand and tell me who creates all the nutrition information that we have been studying for the past several weeks. (Answers will vary)

Today I want to explore in more depth where our information is received and organized. In order to do that, we are going to go through an exercise to help us develop an understanding of the topic AND develop an understanding of how we process information. My hope is that during our work today, you will each develop awareness for how you perceive information and also alternative ways to look at information.

Concept:

- **Food and Drug Administration (FDA)**
  - http://www.fda.gov/opacom/hpview.html (Website Source)
  - Started in 1906
  - Dietary supplements marketed with no approval needed
  - Created and implemented The Fair Packaging and Labeling Act
  - Created and implemented The Lead-Based Paint Poisoning Prevention Act
  - Drugs must be safe and effective
  - Machines must meet performance standards
  - Cosmetics marketed with no approval needed, just safe and properly labeled
  - Judges whether a new product's benefits to users will outweigh its risks
  - Science-based
  - Making sure that all ingredients used in foods are safe, and that food is free of contaminants
  - Must approve new food additives before they can be used in foods
  - Monitors the safety of dietary supplements and the content of infant formulas and medical foods
  - Medical products (medicine machines, vaccinations) need to be proven safe and effective before they can be used by patients
  - Livestock drugs are evaluated for their safety to the environment and to the people who eat the animal products
  - Regulates what's on these labels to ensure that they are truthful and that they provide useable information that helps consumers make healthy, safe decisions when using the product
  - It costs just over a penny-a-day per person
  - Federal Food, Drug, and Cosmetic Act. This law, for the first time, required companies to prove the safety of new drugs before putting them on the market.

- Reviews the results of laboratory, animal and human clinical testing done by companies to determine if the product they want to put on the market is safe and effective. FDA does not develop or test products itself
- Keeps track of how they are manufactured and responds to reports of problems or newly identified risks
- Staff inspects domestic and foreign manufacturers, checks shipments of imported products, and collects and tests product samples for signs of contamination.
- Issues recall notification to manufactures
- REAL EXAMPLES:
  - Cosmetic case
  - Prescription bottle
  - Nutrition label

United States Department of Agriculture (USDA)

- http://www.usda.gov/wps/portal/usdahome (Website Source)
- Meat and poultry products
- Started in 1862 by President Lincoln
- Committed to helping America's farmers and ranchers
- Leads the Federal anti-hunger effort with programs such as Food Stamps, School Lunch, School Breakfast, and WIC.
- Steward of our nation's 192 million acres of national forests
- Encouraging voluntary efforts to protect soil, water, and wildlife on the 70 percent of America's lands that are privately owned
- Brings housing, modern telecommunications, and safe drinking water to rural America
- Is responsible for the safety of meat, poultry, and egg products
- Research leader in everything from human nutrition to new crop technologies that allow us to grow more food and fiber using less water and pesticides.
- Ensures open markets for U.S. agricultural products and provides food aid to needy people overseas
- Helps to keep America's farmers and ranchers in business as they face the uncertainties of weather and markets
- Harness the nation's agricultural abundance to end hunger and improve health in the United States
- Ensures that the nation's commercial supply of meat, poultry, and egg products is safe, wholesome, properly labeled, and packaged correctly
- Facilitates domestic and international marketing of U.S. agricultural products and ensures the health and care of animals and plants
- Ensures the health of the land through sustainable management
- Evaluating the Nutrient Content of the U.S. Food Supply
- Publishes the Dietary Guidelines for Americans
- Science-based dietary guidance, nutrition policy coordination, and nutrition education

Implementation of Strategy:

Phase 1: Present and Identify Concept

1. Present examples of each, already labeled as "example" and "non-example"
   - Use written examples from the table listed
   - Use physical examples whenever possible, such as
     - Prescription bottles
     - Food packaging
       - Meat
       - Crackers
     - Cosmetic container
     - Paint can
     - Sweet 'n Low packet
     - Food label
     - Recall notice or print out
     - Picture of an animal or other wildlife
     - Copy of School Nutrition policy
     - Egg carton with USDA stamp
     - Nutrition education pamphlets
     - Nutrient contents in food
     - "No animals were harmed during testing" label
   - Questions to ask students as you present each of these examples are:
     - How are these examples of the concept similar?
     - What are their characteristics?
     - How are these non-examples of the concept similar?
     - What are their characteristics?
     - How are these examples and non-examples similar, but different concept(s)?

2. After reflecting on these questions as a group, instruct students to start writing down their own thoughts and comments on the Concept Attainment worksheet.

3. Assist the students in generating and testing a hypothesis about concept (We know the category and the characteristics of them, what are some more examples that meet these criteria?)
   - Use questions like:
     - What are some additional examples that we can add to our list to test with our current hypothesis?
     - What are some additional examples for the example or non-example columns?
     - How is this example similar to the other examples listed?
     - How is this example different than the other column?
     - In what ways does the example meet the hypothesis of our concept?
     - What is a label for the concept or category that we are discussing?

4. In pairs, have students write a definition of the concept according to the essential attributes / characteristics. This is to be written on the worksheet as well in order to document the thinking process during the exercise.

Phase 2: Test Concept

1. Have students label additional examples of the concept
   - Teacher reads / shares an example and students respond by using criteria established as a class with:
     - Yes, example of concept
     - No, not example of concept
2. As a class
   - Confirm the hypothesis
   - Name the concept
   - Restate the definitions according to the essential attributes established
3. Now that we all know the categories and the characteristics of them, what are some more examples that we can think of to meet these criteria?

Phase 3: Analyze Thinking Process

1. Have students describe their thoughts
2. Questions to ask during the hypothesis check: (Teacher may want to have them write their response to these questions on the back of their think sheet, depending on level of student participation in class discussion)
   - How did you develop your hypothesis?
   - Did you change your hypothesis?
   - Why did you change your hypothesis?
   - What example / non-example, thought, or idea prompted you to change your mind?
3. Discuss how the hypotheses and list of attributes assisted in this exercise.
4. Look at hypotheses the students generated
   - What are the different types of hypotheses created?
   - How many did you create? as a class?
   - Did it help to have the hypotheses written down to look at?
   - Is there a difference between the different types of hypotheses and why one helped you more than another?
   - What did you think about that helped you identify the concept?

Closing/Generalizations:

In life there are many different sources of information that influence our daily thinking. We need to remember to take a look at where we get our information and why we believe the information presented to us. With the increase in use of the Internet, it is easier than ever to gain information. It is also easier than ever for ANYONE and EVERYONE to post information that they want on the Internet. Often times, people do not reflect on the information to see if it is reliable and valid.

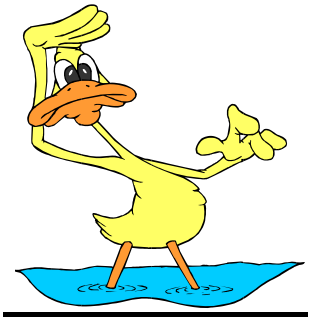
Today we explored the existence of the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA). We compared information and learned what each organization is responsible for regarding food and nutrition in the United States. We also learned to look critically at information and to find connections and draw conclusions between information. If we are going to become responsible consumers in this high-tech world, we have to learn to compare information and draw conclusions from it by reflecting on our thinking process.

Assessment:

- Exit slip that asks students to list 4 pieces of information they found informative from today's class
- Classroom observation during discussion
- Comments written on Concept Attainment Worksheet
- Unit test on obtaining nutritious foods

EXAMPLE		NON-EXAMPLE	
Concept: **Federal Drug Administration or Government Agency consumer protection**		**Concept:** **United States Department of Agriculture or Protection of Land and products through education**	
Examples to use in class / Explanation	Modifications to example before class	Example to use in class / Explanation	Modifications to example before class
Prescription container	Add following label: Drugs available through prescription only	Meat package	Show full example if possible
Paint can	Add following label: Paint with no-lead base	Egg carton label with USDA stamp	Highlight the USDA stamp on carton
Cosmetic container / *No Cosmetic safety testing*	Cosmetics labeled with contents	Chemical or cosmetic container with the disclaimer that no animals were harmed in testing of product	Highlight this part of label: Not tested on animals/no animals were harmed in the making of this product labels
Whole wheat cracker box with health appeal	Highlight the nutrition / health appeal on box	Nutrient label from a food container	Remove the actual nutrition information and only show the nutrient label portion
New label off a package	Have any example handy	Website www.mypyramid.gov	Have print out of this website's main page with web address in large font
American Heart Associations stamp or seal of approval / *Heart healthy*	This can be found on a box of Cheerios	Picture of land and forests	
Truthful labels and claims	Type out this statement in large font	School lunch program / menu	
Sweet 'n Low container, MSG / *Additives tested and approved*	Either obtain the actual product, or highlight one or both of these additives on a real product label	Nutrition Education pamphlet	
Low-fat yogurt container / *Special food claims defined such as lite, low fat, reduced fat*	Highlight the words "low-fat"	Rotation of farm land = health of land	
Recall notification letter or print out (one for toys, food, and prescriptions)	This needs to be printed and the word "recall" highlighted – can be found on most consumer websites	Statement: National Forest Steward	
Picture of a medical machine	Label it or highlight the message that it is approved for medical use	Copy of Nutrition Policy for schools	
Infant formula container / Issue guidelines for	Highlight the label section that states it is FDA approved	Wildlife protection signs or statement	
Food label with approved claim	This can be any product that uses the words "Reduces risk of…" or some other health claim (look for foods emphasizing fiber or whole wheat)	1862	
1906		Meat handling tips	
Picture of science or medicine insignia		Picture of agriculture insignia	

Attributes	Attributes
Science-based	Farm / agriculture centered
Approves / clarifies food claims	Promotes nutrition education
Goes beyond just food products – paint, toys, medicine	Does not stop at animals, but concern for land resources
Concerned with what is in food (additives and free of contaminates)	Concerned with how product was made or tested (animals)
Integrated into each component of life	Concerned mostly with food products from animals and nutrition education



Concept Attainment Worksheet

Concept attainment is searching for and listing characteristics that can be used to label examples from non-examples of a concept.

Concept: _____

Examples/ Yes	Non-Examples/ No
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.

Essential Elements, Characteristics	Essential Elements, Characteristics
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Hypothesis (based on "Yes" attributes and the essential elements):

_____

_____

Definition of the Concept:

_____

Name: _____

Family and Consumer Sciences Department
Exit Slip

List 4 pieces of information from today's class that you found to be helpful in understanding the difference between the FDA and the USDA. In your response, be sure to include the reasons why you found each one helpful to your learning.

1.

2.

3.

4.