

### SMART FOODS LESSON

## EXPERIENCE: NUTRIENT NAVIGATION



Age	<input type="checkbox"/> Children 7-10	<input checked="" type="checkbox"/> Children 11-14	<input checked="" type="checkbox"/> Mixed Ages
Setting	<input type="checkbox"/> Classroom	<input type="checkbox"/> Camp	<input checked="" type="checkbox"/> Either
Location	<input type="checkbox"/> Outside	<input checked="" type="checkbox"/> Indoors	<input type="checkbox"/> Either

**Virginia Standards of Learning**

English 3.1, 3.2, 3.8, 4.1, 4.2, 5.1, 5.2, 6.1, 6.2, 7.1, 8.2, 8.7

Health 3.1, 3.2, 4.1, 5.1, 5.2, 6.2, 6.4, 7.2, 7.5, 8.3

**Project Skill:** Learning about the different nutrients found in different foods and food groups of MyPlate.

**Success Indicators:** As a result of this activity, children will be able to:

- Explain why different food groups and nutrients are important
- Recognize MyPlate
- List and identify the different food groups of MyPlate
- Describe foods that belong in each of the food groups

**Life Skills:** Decision making, Planning, Teamwork, Group Organization

**Preparation Time:** Time needed to set up stations. For the other ideas, you will need time to collect the props before class.

### SUPPLIES:

- *MyPlate:* <http://www.cnpp.usda.gov/Publications/MyPlate/GraphicsSlick.pdf>
- Table tents or 8-1/2" x 11" inch pieces of paper folded in half with the following pictures or words of the body parts, along with examples of foods or food models from the different food groups. Be as creative as possible by choosing a wide variety of foods to illustrate the points.
  - Eyes – Fruits, vegetables (such as broccoli and peaches)
  - Teeth – Milk, other dairy products

- Intestines – Beans, fruits, vegetables
- Hair – Meat, beans, nuts (including peanut butter, tuna fish, chicken)
- Muscles – Meat, beans, nuts
- Blood – Meat, beans, eggs
- Gums – Fruits, vegetables (such as carrots, mangoes, bananas)
- Bones - Milk, other dairy products
- Brain – Breads, cereals, rice, pasta (such as corn bread, spaghetti, tortillas)
- Whole Body – Choose a food from each food group of the MyPlate (this could be a trick question for the students)
- Skin - Water

### STEPS:

1. Show MyPlate and distribute handouts of MyPlate to all of the children. Review it by asking them what different food groups are in MyPlate and why different food groups are important.
2. Assign students to groups and hand out paper to each group. Ask each group to have a recorder, someone to write down their ideas.
3. Provide the different groups with situations and tasks, like those shown in this lesson.
4. Allow all groups to explore each of the stations (see Supplies). Provide a set time period for groups to spend at each one.

5. After they have visited all of the stations, ask each group to try to think of the nutrients that these foods contain and how these nutrients help the different body parts. On their pieces of paper, have the groups write down the reason(s). You can also have them brainstorm out loud with the whole class.
6. Discuss what food and nutrients they would definitely include in a list of “necessary” foods. Write down the answers on a chalkboard or flipchart.
7. Once they have completed this, summarize the importance of the different food groups in terms of nutrients and how they help different organs and body parts.
8. Ask the students to tell their parents about this lesson.

### **TIPS:**

- This activity should only be taught if the students have already learned about MyPlate and have a general idea of the nutrients found in different foods.
- Depending on the number of students, you may also wish to assign students to pairs, rather than groups.
- You may also choose to have them design their own “situation” and “task” based on their interests.

### **SITUATIONS AND TASKS:**

**Situation:** You have just been asked by NASA to submit a list of foods for space travelers.

**Task:** When you visit each station, write down the foods and body parts that correspond to each other. Consider what nutrients help each body part. What foods would you suggest to NASA?

**Situation:** You are going to be on a kids’ version of “The Next Food Network™ Star.” In this variation of the show, you are asked to create different meals that contain all the nutrients you need. Once you submit your meal ideas, you cannot change them.

**Task:** Which foods would you put on your list? What nutrients go along with the foods and different body parts? Write your ideas down on a piece of paper.

**Situation:** You will be sailing around the world for one year. While you are preparing for the trip, you are asked to consider what nutrients you will need to stay healthy.

**Task:** On a piece of paper, write down the foods and the parts of the body shown at each station. Which

nutrient corresponds to the body part at each station? How can you make sure you have the foods you need for a year-long sailing trip?

### **OTHER IDEAS:**

- Use props or pictures to illustrate the nutrient functions of organs. Following are some examples:
- Spigot or faucet (water)
- Flashlight or sunglasses (vitamin A that helps with vision)
- Oxygen tank (iron which builds red blood cells to carry oxygen)
- Tool box (protein needed to build muscles and tissue)
- Plastic hose (fiber that helps move food through the intestines)
- Shield (vitamin C which shields and protects our bodies from infection)
- An actual bone (calcium that builds strong bones)

### **SHARE:**

- What did you like about this activity?
- What was difficult?

### **PROCESS:**

- What did you learn from this activity?
- What are the different nutrients that you learned about? Which nutrient functions were you surprised about?
- What foods and food groups are high in vitamin A? vitamin C? carbohydrates? calcium? iron?
- What other nutrients are important?
- What are the different food groups in MyPlate? Why are the different groups important?

### **GENERALIZE:**

Why is it important to learn the different roles of nutrients in your body?

Why is it important to learn about MyPlate?

What foods in the school lunch will help you get some of the nutrients we talked about today?

What are some foods you eat at home that have some of these nutrients?

### **APPLY:**

How could you make different choices to get more nutrients in your diet and help your different body parts?

<b>NUTRIENT</b>	<b>FOOD SOURCES</b>	<b>FUNCTION</b>
Carbohydrate	Complex: Breads, cereals, grains, potatoes, corn Simple: Fruit	Provide energy to play and think
Protein	Meat, poultry, fish, dry beans, nuts	Build and repair body tissue
Fat	Butter, margarine, oil, lard	Insulation and energy storage
Vitamin A	Liver, yellow and dark green the vegetables, yellow and orange fruit	Night vision and prevention of infections
Vitamin B <sub>1</sub> , B <sub>2</sub> , B <sub>6</sub>	Whole grains or enriched foods and cereals	Help with energy utilization
Vitamin C	Citrus fruits, tomatoes, berries, green leafy vegetables	Heal wounds, build tissue, help with iron absorption
Vitamin D	Sunshine, fortified milk	Assist with calcium absorption
Vitamin E	Vegetable oil, nuts, wheat germ	Protect tissues from oxidation
Vitamin K	Leafy greens, wheat germ, oil	Clot blood (such as after cuts)
Calcium	Dairy products, (milk, yogurt, cheese) dry beans, calcium-fortified tofu, soy milk, orange juice	Build bones and teeth, form blood clots, and help with muscle contraction
Iron	Meat, poultry, fish, dry beans, enriched breads and cereals	Helps build red blood cells along with protein to carry oxygen throughout the body
Zinc	Red meats and fish	Fight infections

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