Fruitful Minds
nutrition education

Fruitful Minds Lesson 5: Exercise, Energy and Nutrition

Objectives

- Teach students the connection between food and energy and emphasize the health benefits of physical activity.
- Understand that food provides energy for our body.
- Understand basic metabolism - what happens to food after we eat it?
- Discuss energy balance and how our body responds to too much sugar or fat.
- Understand the many benefits of physical activity, including strength, flexibility, and energy levels.

Materials

- Powerpoint
- Guest athlete
- Fruitful Notes for Lesson 5
- Physical activity cards

Prior to Class

- Confirm that the program manager has asked the teacher to prepare the following:
    - Request the teacher to assign students different leadership tasks: distribute handouts, distribute snacks, select speaker (first student selects who will answer a question, and the chosen student can choose the next, and so on…)
    - Write roles and students' names on the board.
    - Ask the teacher to make name tags for students to put on their desks
- Distribute questions to the athlete a week ahead and let him or her know the class agenda
- Prepare for physical fitness activity
- **Before you start, please turn off your cell phones.**

Lesson 5 Overview

1. Guest athlete introduces himself/herself to students, followed by Q&A session. The questions should have been given to the athlete beforehand so the athlete had time to prepare. After the session, the athlete can answer additional questions that students have.

2. Review of previous lessons
    - Fill in the food groups and servings on the first page of Fruitful Notes
    - How many serving or cups of fruits and vegetables should we eat a day? *2-3 of each.*
    - Is it okay to have 5 fruits and no vegetables? *No, you need to have all food groups in your diet to be balanced.*

- Reminder of how many grams in a teaspoon; write this down in Fruitful Notes. *4g = 1tsp.*
- What is the goal of advertising? *get people to buy more food* What is one example of an advertising technique? *emotion, famous people, association, jingles…etc.* Write these down on Fruitful Notes.

3. Present Powerpoint slides: Today, we will focus on exercise, energy, and nutrition. Fill in Fruitful Notes for Lesson 5 as we go over this lesson.

   Talking points for each slide:

Slide 2 - Physical activities and nutrition work as a team. We get energy from nutrients in our food, and this energy can be used to do different activities. Physical activities also help us to get rid of the extra energy that our body doesn't need.

Slide 3 - See slide
- Kids that exercise regularly (60 min/day) use blood sugar more efficiently, and exercise protect them against type II diabetes
- *Why do you like to exercise? How does physical activity make you feel?*

Slide 4 - See slide
- *Write down "1 hour" in Fruitful Notes.*

Slide 5 - In Fruitful Notes, tell students to write down "aerobic" and "running" for (1).

Slide 6 - In Fruitful Notes, write down "strength training" and "push-up" for (2).
- If students ask, strength training can be safe if they are guided by training professionals and approved by their doctors. (Remember, everyone is different!)
- Too much or improper strength training could lead to injury.

Slide 7 - Write down "balance and stretching" and "yoga" for (3).
- **Do Physical Activity Competition. See the "Activity" section for details.**

Slide 8 - See slide

Slide 9 - 1 calorie = 1 unit of energy
- The more energy you use, the more calories you need
- We talked about how to tell how much calories is in a food: by reading the food label.
- *On Fruitful Notes, write down that one calorie equals one unit of "energy."*

Slide 10 - See slide

Slide 11 - Everything that your body does requires energy, even things that you don't usually think about, such as breathing, growing, thinking...
- If you eat more calories than the amount of energy your body needs, the excess calories will be stored as fat in your body. *Write "fat" in Fruitful Notes.*

Slide 12 - Energy need depends on gender, weight, and how much you exercise.

Slide 13 - *What would happen if we eat as much as Michael Phelps does? Why? (We will gain a lot of weight, because we don't need to use as much energy as he does.)*
- Even though he eats 12000 calories, his body is not storing them as fat because he uses them all.

Slide 14 - See slide

4. **Food and Energy Activity**. See the "Activity" section for details.

<u>Activities</u>

- Physical Activity Competition
  - Class is split into groups of around 5 people.
  - Each group has to complete 4 tasks. A group cannot proceed to the next task unless everyone in the group is done with the previous task.
  - Ambassadors should time how long it takes each group to complete all tasks; after one group completes all tasks, another group can proceed. (While one group complete all tasks, other students watch them.)
  - After each task, the students have to all say what type of exercise they just did before they move on.
  - The tasks are:
    (1.) Run from one location in the classroom to another location and then run back ; ambassadors can decide the appropriate locations. (students say "aerobic")
    (2.) Do five sit-ups. (students say "strength training")
    (3.) Do two push-ups. (students say "strength training")
    (4.) Do a stretching or balance pose and hold still for 5 seconds; ambassadors can choose which pose they want to do. (students say "stretching" and/or "balancing")

- Food and Energy Activity
  - The objective of this activity is to relate food to physical activity and energy storage.
  - There are two stations: "physical activity" station and "fat storage" station.
  - One ambassador holds a sign that says "physical activity" while another one holds a sign that says "fat storage."
  - Students in the class are split up into five groups: "grains," "vegetables," "fruits," "dairy," and "meats/beans." The students should each hold up a piece of paper with their corresponding food groups so ambassadors know what food groups they are.
  - Ambassador will read out a scenario, and students have to go to one of the two stations. The scenarios are as follows: (the first scenario can be used to demonstrate the activity)
    (1). I ate a big bowl of rice, and then I went to sleep. → Students who represent grains should run to the "fat storage" station.
    (2). I ate a chicken sandwich with lettuce, and then I went running. → Students who represent grains, vegetables, and meat/beans should run to the "physical activity" station.
    (3.) I had an apple and milkshake for snack, and then I went swimming. → students who represent fruits and dairy should run to the "physical activity" station.
    (4.) This afternoon, I had a blueberry parfait for dessert, and steamed broccoli with salmon over rice for dinner. Right after dinner, I sat on my couch and watched TV for 3 hours. → everyone should run to the "fat storage" station.
- This activity demonstrates how your body uses food. If you do physical activity, the food you eat will give you energy to do different activities. If you are not active, the food you eat will be stored as fat.

Family Discussion Points

- Ask for one volunteer: Do you exercise with your family and/or friends during weekends or holidays? What type of exercise?
- Ask for one volunteer: Do you think your friends and/or family members get enough physical activity? If not, what suggestions can you make to help them?