

LESSON

4

eating and physical activity

Objectives

Learners will . . .

- discuss the relationship between physical activity and food consumption to energy balance
- recognize that calories are a measure of energy for both foods and physical activity
- relate energy balance to sample scenarios

Materials

- HLC Posters—MyPlate, Nutrition Facts Label
- Activity Sheet: *Scenarios Handout*
- Calculators (optional)

Vocabulary

- **Calorie**—a measurement of energy
- **Energy balance**—to equal energy consumed through food intake and energy used through physical activity

RECAP

Tell students last lesson they learned to make healthy food choices when dining at fast food restaurants.

KEY MESSAGE

Write on board and tell students:

Balance the food you eat with physical activity to stay healthy.

INTRODUCTION

Show students the picture of the USDA MyPlate placemat on the HLC Poster—MyPlate.

Remind students that the MyPlate placemat illustrates not only what types of food we should eat to stay healthy but also suggests portions for the foods we should eat. In fact, to be more specific about exactly how much of each food we should eat, the USDA suggests a Recommended Daily Amount of foods for each food group. Ask students why they think the USDA puts recommended limits on foods if those foods are good for your body.

ACTIVITIES



ONE—SCIENCE

Ask students what they think energy balance means. Explain to students that energy balance simply means that the energy we consume is balanced by, or equal to, the energy we use. Write the following formula on the board and discuss with students.

Energy consumed = energy used = energy balance

Remind students that energy is measured in calories. Explain to students that some foods contain more calories than others. Energy used through any type of activity is also measured in calories. Tell students the amount of calories in a food can be found on the Nutrition Facts label. The estimated calories used through a particular activity can also be found with research, but it will depend on their sex, age, height, weight and other factors.

Show students the example of a Nutrition Facts label on the HLC Poster—Nutrition Facts Label and ask them how many calories are in 1 cup of macaroni and cheese (250). In 2 cups? Write the following examples of physical activities and the amount of calories each burn on the board. Ask students what combination of activities they could use to balance, or equal, the calories consumed in 1 cup of macaroni and cheese.

<u>Activities (30 minutes)</u>	<u>Calories burned</u>
Bicycling (moderate pace)	172
Basketball (non-competitive)	129
Skating	162
Dancing (actively)	119
Jump-roping	194
Running (12 min/mile)	187
Sitting and watching TV	22
Touch football	172
Volleyball	97
Walking (24 min/mile)	65
Light swimming	86

Explain to students that the food that they eat and the amount of physical activity that they engage in does not have to balance exactly each day, but should balance over time to stay healthy.



TWO—SCIENCE & MATH



Have students solve the word problems on the *Scenarios Handout* activity sheet either independently or in small groups. When complete, have students brainstorm ways to help the characters achieve energy balance. Have students share their findings.



WRAP UP

1. What does energy balance mean?
2. Why is it important to have energy balance?
3. Do you think that you have energy balance? Why or why not?



LESSON BOOSTER

Materials: Paper/pencil

Have students track their food consumption and physical activity over the course of two to three days. Have students analyze their diet and physical activity habits to determine if they have energy balance. They can record total calories eaten and total calories burned through physical activity each day. Based on their findings, ask students to determine what changes they could make to achieve energy balance. Remind students they should get at least 60 minutes of physical activity every day.

SCENARIOS HANDOUT

SCENARIO

1

Between breakfast and dinner, Sal ate 1,950 calories yesterday. Through his normal daily activities such as doing his work at school, playing basketball, watching TV and doing homework, he burned 1,825 calories. If Sal continues this routine will his energy be balanced? What should Sal do to achieve energy balance?

SCENARIO

2

Valerie is involved in many extracurricular activities including track and cheerleading. She is also very busy preparing for exams. Yesterday Valerie skipped breakfast and lunch and only ate dinner with dessert totaling 560 calories. Through all of her normal daily activities as well as track and cheerleading, Valerie burned 1,500 calories. If Valerie continues this routine will her energy be balanced? What should Valerie do to achieve energy balance?

SCENARIO

3

Steven's doctor has suggested that he lose weight to help control his diabetes. Steven has reduced the number of calories consumed in his day from 2,600 to 2,000. His normal daily activities include going to football practice, playing video games with his brother and doing his homework. All of these activities burn 1,720 calories. He has started walking to and from school, which helps him burn an extra 280 calories a day. If Steven continues this routine will his energy be balanced? What should Steven do to achieve energy balance?

SCENARIO

4

Jenny uses the USDA MyPlate to make sure she eats a variety of healthy foods and the right amounts of each food. Jenny also makes sure that she gets 60 minutes of physical activity almost every day. On a typical day, Jenny burns 1,500 calories. Yesterday, Jenny ate 3 healthy meals with lots of fresh fruits and vegetables. She ate very little oils, and fats and added sugars. Her total calorie intake yesterday was 1,500 calories. If Jenny continues this routine will her energy be balanced? What should Jenny do to achieve energy balance?