

## **Lesson: Energy Balance**

### **Supplies Needed:**

- EP\_Five-Minute-Fitness-Ideas
- 1.2\_LV\_Energy-Balance-Visuals

### **Goals:**

- Students will learn the energy balance equation.
- Students will understand the importance of energy balance for a healthy body.
- Students will understand the signals bodies give of too much or too little food and will start to adjust their food intake accordingly.

### **Background:**

Energy balance is when the energy we put in our bodies such as food & beverages equals the energy we put out such as exercise/physical activity. Weight gain occurs when we put more energy/food and beverages in than we put out/exercise/physical activity; weight loss occurs when we put more energy out/exercise/physical activity than we put in/food and beverages. To build a healthy body, it is important to consume a balanced diet and engage in exercise/physical activity every day.

**(Read and talk about the story of Goldilocks and the Three Bears to the class a week or two before this lesson.)** This Introduces the concept of too much, too little, and just right.

Some students may live with food insecurity, not knowing if they will get enough food to avoid hunger. The school lunch program may be students' primary source of food so they may go hungry over weekends and holidays. They may also have limited experience with eating too much. Please be watchful for this and sensitive with your word choices.

### **Lesson:**

**(Choose an exercise from 5 minute Fitness Ideas and do it for five minutes.)**

Who remembers what we talked about last month?

*(Go Foods and Slow Foods)*

Raise your hand and give me some examples of Slow Foods.  
(*Chips, candy, cookies, ice cream, French fries*)

Now raise your hand and give me some examples of Go Foods.  
(*Fruits, vegetables, bread – especially whole grain, low fat milk, nuts, chicken, pasta/noodles*)

Eating Go Foods gives our bodies the fuel we need to grow strong and be healthy. We also need to move our bodies to be healthy. What are some ways that you like to move your body?

(*Play on the playground, ride bikes, play sports, play tag, etc.*)

Being active helps build a strong heart, bones, and muscles, and it is so much fun!

Today, we are going to talk about finding the right balance of eating and physical activity. Did you know that the more you move, the more fuel you need? Think about taking a car ride. You need to fill up the gas tank more often when you take a long road trip, right? However, a car doesn't need to fill up at the gas station if it doesn't travel very far. Everybody needs food to live. But sometimes, people eat too much or too little compared to how much they move their body.

**(Optional:** Do you remember the story of Goldilocks and the Three Bears? When she went to try the bears' porridge the first was too hot, the second was too cold, and the third was just right. We can think about how much we eat in the same way.)

Think about a time when you were really hungry. That would be a time when you ate too little. How did you feel? When we don't eat enough, we can have a stomach that grumbles, get a headache, feel tired, have a hard time concentrating, or feel crabby. This is one of the reasons it is important to eat breakfast. Raise your hand if you ate breakfast today. Great! After sleeping 10-11 hours your body needs new fuel to get started with the day.

Now think about a time when you were really full. That would be a time when you ate too much. How did you feel? If we eat too much (especially too many Slow Foods), our stomachs can feel uncomfortable from being too full or we can feel sleepy.

When we eat food, we want to eat enough to give us energy. Just like Goldilocks, we don't want to eat too little or too much or we may feel sick. We want the amount of food we eat to be just right. We call this Energy Balance. Energy balance is when we eat the right amount of food compared to our activity level. **(Show slide 1.)** To start, we will demonstrate energy balance. On one side of the seesaw we have a balanced meal of

Go Foods. On the other side we have physical activity, such as running or playing outside.

What if we get very little physical activity? **(Show slide 2.)** If we eat too much, more food than we need, we might get an uncomfortable stomach or feel sleepy. If we continue to eat more than we need day after day, we might gain too much weight because we have too much energy compared to how much energy we use.

Have you ever eaten too much like at a birthday party, Thanksgiving, or other holiday? Do you remember how you felt? Did you get an uncomfortable feeling in your stomach? Did you want to run around a lot? Now think about your lunch or dinner last night. How did you feel after that? That is the difference in how you feel when you have too much or just the right amount of food.

What would happen if we ate very little food? **(Show slide 3.)** If we don't eat enough, we might get a headache, have a hard time concentrating, or feel weak. If we continue to eat less food, we may lose weight and be less healthy.

Now we will do an activity that will show you how hard it is to balance without enough Go Foods. Everyone stand up. Let's pretend that one leg is Go Foods and one leg is energy. So what happens if we eat too much or too little Go Food? Let's lift up one leg and see. Is it harder to balance? Imagine having to move around all day on just one leg. It would get very tiring. If you eat too much or too little go food your energy isn't balanced, and it's harder to stay happy and do what you want to do. **(Tell them to put down their foot.)**

Now what happens if we have enough food, but not enough exercise? Let's lift up our other leg and find out. It is harder to balance. Could you imagine trying to walk to school every day on only one leg? If we get too little exercise our bodies can become weak and it can be hard to do the things we love. **(Tell them to put their leg down.)**

What are some things you love to do?

*(Play tag, play soccer, play on the playground, go sledding, ride bikes, dance, swim, etc.)*

Those are all great ways of playing actively. The great thing about our bodies is the more we move them, the easier it becomes to move them in the future. So it's important to play actively every day.

Kids' bodies need energy to grow, which is why it is important to have energy balance. In order to grow a healthy body, we need to eat the right amount of Go Foods, and we need to be active every day.