Energy Balance and Physical Activity

Power Down to Power Up

Grades 5 – 8 Boys’ Club

I. Nutrition Education Goal & Objective:
   Goal 1: Students will comprehend concepts consistent with USDA guidance related to eating and physical activity for good health.
   
   Objective: As a result of Pennsylvania’s SNAP-Ed plan, students will know, understand, analyze, and apply concepts, as developmentally appropriate, that are consistent with USDA guidance about the benefits of:
   1. Balancing caloric intake with calories expended.
   2. Being physically active every day as part of a healthy lifestyle.

   Goal 2: Students will apply skills consistent with USDA guidance related to eating and physical activity for good health.
   
   Objective: As a result of Pennsylvania’s SNAP-Ed plan, students will be able to:
   1. Assess personal health practices.
   2. Develop a goal to adopt, maintain, or improve a personal health practice.

II. Pennsylvania Educational Standards:
   A. 11.3 Food Science and Nutrition
   B. 1.6 Speaking and Listening
   C. 10.1 Concepts of Health
   D. 10.2 Healthful Living

III. Outcomes
   A. Students will list benefits of physical activity and a healthy diet.
   B. Students will describe a variety of physical activities.
   C. Students will demonstrate recipe understanding by preparing and tasting a healthy snack.

IV. Materials
   A. Name tags
   B. Soft ball or Seedie for icebreaker
   C. Balance beam scale
   D. Legos™ or similar style blocks (two colors, same sizes, rectangle or square)
   E. Sign: “Energy In”
   F. Sign: “Energy Out”
   G. Activity Charades game cards (see Teaching Aids following lesson plan)
H. Job cards  
I. Taste testing ingredients: popcorn, powdered ranch dressing, spray butter, juice boxes  
J. Large bowl for popcorn  
K. Mixing/serving spoon  
L. Bowls  
M. Napkins  
N. Gloves  
O. Antibacterial wipes/gel  
P. Trash bag  
Q. Tablecloth  
R. Reinforcement that conveys the appropriate nutrition message: Pedometer  
S. Newsletter  

V. Procedure  
A. Introductory:  
1. Icebreaker:  
   a. The boys should throw the ball or Seedie to each other. When caught, that boy should name something he ate in the past week that had whole grains. If he didn’t eat any whole grains, think of something he could have eaten with whole grains. Congratulate boys on taking steps to promote their health.  

2. Welcome  
   a. Tell boys how great it is to see them and meet again in this all-boy’s club.  
   b. Ask for a volunteer to summarize what happened last week for anyone who is new to the club.  
   c. Remind the boys of the goal set last week. How many tried to reach this goal? How many were successful? Why was it easy or hard to do? Encourage boys to keep trying to reach the goal if they didn’t do it last week, changing it a bit if that is helpful.  
   d. The past couple of weeks have been spent learning healthy ways to eat. Eating good foods using My Plate is one way to be healthier. Another way is to move around more  
   e. Discuss exercise and the associated health benefits  
      i. What are types of exercise? Examples:  
         • Sports (basketball, soccer, tennis, etc)  
         • Dancing  
         • Playing outside with friends (biking, walking, jump rope etc)  
      ii. How does it help us be healthier? Examples:  
         • Feel better about ourselves  
         • Have fun with friends  
         • Makes heart healthy  
         • Gives us more energy  
         • Makes us sleep better  
         • Helps us deal with frustration or anger about something  
      iii. About how much should we be doing everyday?
• If we think back to MyPlate, this is a tool that helps us be healthy on a daily basis.
• Besides eating a nutritious diet, it is important that we get enough exercise to keep our bodies healthy and strong.
• How many minutes do you think we should be active each day?
• The recommendation is 60 minutes every day. Does this sound hard to do or easy to do?
• Discuss ways to fit more activity into the day:
• Examples: walk to school, do some exercises during commercials, ride bikes, play with brothers and sisters, challenge friends to basketball game, dance to music in your bedroom, etc.

B. Developmental

1. Activity 1: Energy Balance
   a. Introduce the concept of energy balance and healthy weight using the balance scale. Explain that our bodies are constantly balancing the food we eat and the exercise we do, just like this scale balances whatever is placed on it.
   b. The food we eat and the beverages we drink provide a way for energy to get into our body. Ask the students what in the food and drinks gives us this energy (answer = calories).
   c. There are also ways to get energy back out – you might have heard of this as “burning energy or burning calories. All the activities we do in the course of a day use up the energy we gave it in the food and drinks.
   d. Some activities use, or burn, more energy than others. What might use up a lot of energy? (biking, running, jumping rope). What might use up less energy? (sitting in class, walking slowly, watching TV, sleeping).
   e. Make one side of the scale ENERGY IN and the other ENERGY OUT. One Lego is a calorie, or a little bit of energy. Green Legos = calories we eat, Red Legos = calories we burn in activity.
   f. Ask some or all of the students to contribute one green Lego to the ENERGY IN side of the scale. Then, ask the same students to contribute one red Lego to the ENERGY OUT side of the scale. What happens? The scale balances.
   g. If we balance the activities that we do with the food that we eat, our weight will stay the same or we will be in balance. This is a good goal to strive for.
   h. Now demonstrate energy imbalance. Example scenario: Let’s say you go to a party and eat lots of food and sit around watching TV. Ask someone to add 2 more green Legos to the ENERGY IN side of the scale to show this food. Watch the scale tip towards the ENERGY IN side. If we take in more energy than we get rid of, we can gain weight. We have eaten more food (energy) than our bodies can use, or burn so we store it away as fat to use it later on. We can get rid of it later by doing some extra activity to balance the scale again.
   i. Sometimes we want to gain weight and sometimes we don’t. Gaining too much weight can be a problem for our health.
   j. Now let’s do something else. Ask for a volunteer to add 3 more red blocks to the ENERGY OUT side. What happens? The scale tips towards the ENERGY OUT side, meaning that we are using up more energy than we are taking in. In this
case, we lose weight. People who have gained too much weight can safely lose it by beginning to become more active. Sometimes this is healthy, and sometimes losing weight is not a good thing. It all depends on the person.

2. Activity 2: Group Movement Survey  
   a. Now that we know how important physical activity is for energy balance, let’s see if we are an active group  
   b. Ask a series of “if” questions, ending each with a different movement. For example:
      o If you napped over the past day, raise your hand.  
      o If you watched TV over the past day, sit down.  
      o If you did some kind of sport or physical activity over the past day, clap.  
      o If you walked more than usual over the past day, hop up and down.  
      o If you played video games over the past day, stomp your feet.  
   c. Discuss which of the activities mentioned were “moving activities” and which were “resting’ activities. What can we say about this group? Are we more “movers” or “resters”? Can you think of any other resting activities? Any other moving activities?

3. Activity 3: Couch Potato Survey  
   a. Now that we know more about the group’s movement, let’s talk more about those resting activities.  
   b. What were some of the resting activities in the last survey? (TV, video games, computer, napping, talking on the phone etc.)  
   c. Think about how much time you do these resting things, especially watching TV  
   d. Let’s look at our group as a whole to see how much TV our club watches.  
      o If you watch 0-2 shows each day, go on the left side of the room.  
      o If you watch 3-4 shows each day, go on the right side of the room.  
      o If you watch more than 4 shows a day, go in the center of the room  
   e. Ask group to draw conclusions about the group’s TV watching based on this activity. Should they strive to watch more or less?

4. Activity 4: Activity Charades  
   a. Option 1 – Team Competition  
      i. Divide class into teams of 5-6 members.  
      ii. Give each participant at least 1 activity card.  
      iii. Each team member takes turns acting out the activity listed on the card without using words or sounds.  
      iv. Other teammates try to guess the activity.  
      v. Once teammates correctly identify the activity, next team member gets up and acts out his activity.  
      vi. First team to correctly identify all of the activities listed on their cards wins.  
   b. Option 2 – Class works together  
      i. Each student takes a turn drawing a card and acting out the activity for the group
ii. Other students try to guess the activity
iii. Once guessed, another volunteer draws a new card and the group tries again to guess.
iv. Game ends when all students have had a chance to act out an activity.

C. Concluding
   1. Discuss one goal the group can set for the upcoming week about physical activity. Make it something realistic and attainable (Example: I will ride my bike twice this week.) Write this goal down so it can be discussed next week. If desired, keep a running list of weekly goals.
   2. Distribute reinforcement items: pedometers
   3. Distribute newsletter.
   4. Discuss Pedometer Challenge form in the newsletter.
      a. Explain the purpose of a pedometer. It counts the number of steps we take each day and allows us to try to beat our record every day, getting more physical activity.
      b. To use them, clip it to your belt or the top of your pants near your hip or your stomach. Wear it all day and before you go to bed, look at the number in the window. Push the button each morning to reset the counter to zero.
      c. Challenge the boys to wear them this week and record how many steps were walked each day on the pedometer record form. The goal is to walk 500 more steps each day. Please bring the form back next week so we can talk about it!
      d. Split the boys into two teams. Explain that next week, we will count the total number of team steps and see which team got the most.
   5. Thank boys for coming. Remind them to be physically active this week and use their pedometers.

D. Taste testing: Spiced Up Popcorn
   1. Have everyone wash hands using proper techniques, or use antibacterial wipes
   2. Optional: Have boys choose job cards to divide preparation tasks
   3. All preparation helpers should wear gloves
   4. Prepare popcorn and distribute juice
   5. Sit down, slow down, savor and enjoy!
   6. Talk about sports teams the boys belong to or activities they like to do at home or at school.
   7. Everyone should help clean up by putting things in trash bag and cleaning up any spills or dropped food
JOB CARDS FOR SNACK PREPARATION

(cut out and place in container to be drawn at random)

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<table>
<thead>
<tr>
<th>1. Spread out the tablecloth</th>
<th>2. Arrange the bowls and napkins in piles on the serving table</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Pour the popcorn into the popcorn maker (not too full). Turn it on and watch it pop!</td>
<td>4. Help catch the popcorn in a large bowl as it comes out of the popper.</td>
</tr>
<tr>
<td>5. When the popcorn is done, sprinkle on the dry topping.</td>
<td>6. Mix up the popcorn and seasoning with your gloved hands or with a spoon.</td>
</tr>
<tr>
<td>7. Scoop the popcorn into individual bowls for each boy.</td>
<td>8. Give each bowl one or two sprays of butter topping.</td>
</tr>
<tr>
<td>9. Make sure every boy has a juice box</td>
<td>10. You are the clean up patrol. Help collect garbage and make sure there are no spills or dropped food.</td>
</tr>
</tbody>
</table>
Teaching Aid
Activity Charades Cards

Cut out cards. Laminate if desired.

<table>
<thead>
<tr>
<th>Football</th>
<th>Lifting weights</th>
<th>Hockey</th>
<th>Basketball</th>
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<tr>
<td>![Football Image]</td>
<td>![Lifting Weights Image]</td>
<td>![Hockey Image]</td>
<td>![Basketball Image]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Golf</th>
<th>Walking a dog</th>
<th>Swimming</th>
<th>Riding a bike</th>
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<tbody>
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<td>![Riding a Bike Image]</td>
</tr>
<tr>
<td>Skateboarding</td>
<td>Tennis</td>
<td>Skiing</td>
<td>Surfing</td>
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<td><img src="image2" alt="Tennis" /></td>
<td><img src="image3" alt="Skiing" /></td>
<td><img src="image4" alt="Surfing" /></td>
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<th>Rollerblading</th>
<th>Soccer</th>
<th>Baseball</th>
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<td><img src="image5" alt="Volleyball" /></td>
<td><img src="image6" alt="Rollerblading" /></td>
<td><img src="image7" alt="Soccer" /></td>
<td><img src="image8" alt="Baseball" /></td>
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</tbody>
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