



4-H Blender Bike: Blending Nutrition and Physical Activity

Using a Blender Bike to Make Smoothies in a Teaching Setting

Intended Audience:

- School classes
- Camps

Lesson Objectives:

Session participants will:

- Better understand the connection between calories and physical activity
- Experience making a healthy food on a blender bike

Time: Approximately 1 hour

Supplies

- Blender
- Measuring cups (½ cup, 1 cup)
- Mixing spoons
- Cutting board and knife
- Bowls
- Scoop for ice
- Sample-size cups
- Ingredients (see recipe)
- Gloves for handling food
- Activity Sheets for *Calories In-Calories Out* and *Create-Your-Own*

Do Ahead

- Review activity instructions.
- Set up stations: *Calories In-Calories Out*, *Create-Your-Own Smoothie Recipe*, and *Making a Smoothie on a Blender Bike* as described.
- Make sure you have all the supplies and ingredients on hand.
- The fruit should be frozen, but it works best if it has thawed *slightly*.
- Copy activity sheets.

INTRODUCTION

Blender bikes—often called “smoothie bikes” because they are commonly used to make smoothies—are stationary bicycles with a blenders attached over the front or back wheel and powered entirely by pedaling. Blender bikes may be used in the classroom or at community events that promote healthy eating. A blender bike serves as an attention-grabber *and* a fun tool to teach about making healthy food and physical activity choices. It provides a creative tool to expose, engage, and educate about the importance of fruit and vegetable consumption and making healthy choices.

How can 30 students *all* get a chance to pedal the blender bike and experience the thrill of self-powered blending in just one class period? The following activity plans suggest ways to incorporate three learning activities, including blender bike pedaling, into one session.

Experience: Ask the participants (who see the blender bike)...

- What do you think a blender bike can be used for?
- Do you think blending food on a bike will be fun?
- Do you think blending food on a bike will be easy or difficult?

WHAT TO DO

Explain that smoothies are an excellent choice because they are a good source of calcium, vitamins, and fiber, and they also contain water (ice). This makes them better options than ice cream shakes or sugary soft drinks that provide calories but little or no nutrients.

To ensure everyone gets a turn, plan to make three different smoothie batches using the instructions on page 2 (blending the smoothie).

Alternately, set up three different activity stations. Divide the students into groups. Ideally, each group should include 10 students or fewer, although up to 15 students per group will work. Depending on the age and number of the students, enlist an adult leader or student volunteer to guide the *Create-Your-Own Smoothie Recipe* and *Calories In-Calories Out* activities.

For a 1-hour session:

	1 st 20 min	2 nd 20 min	3 rd 20 min
Group A	Blender Bike	Create-Your-Own	Calories In-Out
Group B	Calories In-Out	Blender Bike	Create-Your-Own
Group C	Create-Your-Own	Calories In-Out	Blender Bike

For a 45-minute session:

	1 st 20 min	2 nd 20 min
Group A	Blender Bike	Calories In-Calories Out
Group B	Calories In-Calories Out	Blender Bike



See the following resource sheets for additional ideas:

Managing the Blender Bike at Events and in Classroom Setting Resource Sheet

For another version of using the blender bike with a group, see *Beyond Smoothies* Activity

What Is a Smoothie? Resource Sheet – Describes Healthy Smoothies vs. Dessert Smoothies

SUGAR SMARTS –

When selecting ingredients, keep in mind that fruit, fruit juice, and dairy products have naturally occurring sugars in them. Try to use yogurt, fruit, and juice that have **little or no added sugar**. Added sugars should be noted under “total sugars” on the nutrition label.

Read yogurt labels carefully and try to avoid artificial sweeteners (such as sucralose and acesulfame potassium) too.

There are many smoothie recipes available online. Remember to look for recipes without added sugar, honey, or ice cream!

Developed by:

Carol A. Smathers, MS, MPH, Assistant Professor, Family & Consumer Sciences

Theresa M. Ferrari, PhD, Associate Professor, 4-H Youth Development

2017

For the complete *Blending Nutrition and Physical Activity* activity guide, go to <http://www.ohio4h.org/healthyliving>

Blending the smoothie

Ask for 1-2 participants to measure ingredients. They must wash their hands prior to participating. Gloves may be provided.

Provide the basic smoothie recipe. In the following order, have participants measure and add ingredients to the blender container.

- ½ - 1 cup non-fat yogurt (plain or vanilla, regular or Greek)
- 2 ripe bananas
- ½ - 1 cup spinach (optional)
- 3 cups frozen fruit (such as strawberries mango, peaches pineapple, and other berries)
- 2 1/2 cups orange juice
- 1-2 cups ice

Make sure that the bike blender mechanisms turn properly without the blender in place. Next, set the blender on the mechanism, close the lid tightly, and secure the lid and blender with the stretch band.

Have the participants form a line parallel to the bike. Each student should pedal for 20-25 seconds to give everyone a turn to blend the smoothie. Count out loud or use a timer to help indicate the stopping point.

Optional: Have the students in line pretend to pedal, keeping pace with the person on the blender bike.

If the blender will not turn, try stirring the ingredients with a long-handled mixing spoon. See the *Adjusting the Blender Bike Resource Sheet* for suggestions if the blender still will not turn.

When the smoothie is ready it will look uniform in color and texture, and there will no longer be sounds of large chunks of ice churning in the blender. When the group decides the smoothie is ready, the person pedaling gets to ring the bell on the blender bike!

TALK IT OVER

Reflect:

- What was the best part about making the smoothie?
- In what ways did the smoothie taste how you expected?
- How often do you think about eating too many calories or not burning off enough calories?

Generalize:

- Which dietary recommendations can you meet with a smoothie?
- Name other foods that you could blend on a blender bike. Which are healthy and which are not so healthy?
- Which high-calorie foods do your friends and family like to eat? Not sure about this question

Apply:

- Using the general smoothie recipe, which ingredients would you add to a smoothie if you could choose any (how many bananas, which type of yogurt, which type of frozen fruit)? Would you add spinach?
- Would it be possible to make a smoothie at home with your family? Why or why not?
- You didn't pedal the bike for very long to make a smoothie. Biking is one way to get physical activity in your day. Which physical activity could you add more of to your daily routine?