

The Farmer Grows a Rainbow

Second Servings

Grade Level: 2

Approximate Length of Activity: One-two class periods

Objective

Teacher

1. To help students understand foods from each group which should be included in a daily diet as well as appropriate serving sizes of each food item.

Students

1. Develop and apply enabling strategies and skills to read and write.
2. Identify the serving sizes and number of daily servings needed from each food group of MyPyramid.
3. Recognize and use appropriate units of measurement.
4. Develop fluency with multi-digit computation.
5. Apply knowledge and behavior self-management skills to areas of nutrition and physical activity for healthy growth, development and maintenance.
6. Exhibit a physically active lifestyle.

**Michigan Content Standards: (Health) Strand 1-Standard 1- 1.1, 1.2, 1.3;
Strand 1-Standard 3- 1.5, 1.7**

Vocabulary

- **Appropriate**
- **Food group**
- **Portion**
- **Pyramid**
- **Serving**

Background

From the National Dairy Council:

About Serving Sizes and Recommendations

Each food group provides different nutrients and no single food group can supply all the nutrients our body needs. Each food group provides a unique set of nutrients and all the foods in each group have similar nutrients. For example, food in the Milk Group provide calcium, protein and riboflavin, while foods in the vegetable group provide vitamins A and C. That's why it's important to eat from all the food groups to get the 40+ nutrients our bodies need each day.

Common Servings and Portion Sizes-What's the Difference?

Though "portion size" and "serving size" are used interchangeably, there is a difference. Knowing the difference makes it easier to compare what you eat to the MyPyramid's daily recommendations.

The USDA MyPyramid provides food group recommendations in "ounces" and "cups." Recommendations for the Grain Group and the Meat Group are provided in ounces, while recommendations for the Milk Group, Vegetable Group and Fruit Group are in cups. The serving size that is equal to an "ounce" or "cup" are provided for each group. For example, 1 ½ ounces of hard cheese or 8 fluid ounces of yogurt count as 1 cup from the Milk Group and 1 slice of bread or ½ cup of cooked pasta counts as an ounce from the Grain Group. MyPyramid shows common serving sizes for a number of different foods within each group.

The amount we need from each Food Group depends on our age, gender and physical activity level. To find the amount that is right for you, visit "MyPyramid Plan" at www.MyPyramid.gov.

Serving sizes are also listed on the Nutrition Facts Panel and the nutrition label, along with the calorie and nutrient content for a serving. Serving sizes on food labels may be, and often are, different from MyPyramid servings. For example, the serving size for beverages is 1 cup, whether it is fruit juice, milk or soda. This allows you to use the nutrition label to compare similar foods. While the nutrition label tells us what people might typically eat, it is not a recommendation for how much we should eat. The number of servings in a package is also listed on the nutrition label. Keep in mind, many packages that look like single servings often contain two or more servings.

Portion size is the amount we eat at a meal or snack. Portion sizes can be bigger or smaller than MyPyramid serving size equivalents. Research shows that Americans are eating larger and larger portions, which may contribute to the current epidemic of overweight and obesity. For example, a typical bagel today may count as two, three or even four Grain Group servings. Considering that MyPyramid recommends 6 ounces from the Grain Group for the average American, with today's portions, it's easy to eat more than we need! Get out some measuring cups and a scale, and take some time to learn just what a MyPyramid equivalent serving is. Make a mental image, and use it to compare what you actually eat to what you need each day!

Activity Outline

1. Make copies of "Portion Size Guide" for each student.
2. Prepare "Puzzle Pieces" for student use at the close of the lesson activity.
3. Prepare copies "Food Math" activity from "Level 2, Lesson 2: Food Math" from MyPyramid for Kids" See Materials Needed for Web site.
4. Gather materials for grab bag activity.
5. Gather real or play food items for "Run the Rainbow Challenge: Hot Potato and More!"
6. Teach "The Farmer Grows a Rainbow-Main Course" Lesson
7. Using information from www.mypyramid.gov and Background Information, discuss appropriate serving sizes and how they can be measured by comparison with common items. Distribute copies of "Portion Size Guide" to students. As a class, discuss the information on the chart. Using objects gathered, have students participate in a grab bag activity regarding portion sizes. Put all items in the bag. One at a time, students pull an item from the bag. Challenge the class to locate the grab bag item on their "Portion Size Guide." Call on one student each time to name the food item and the portion size unit of measurement represented by the object pulled from the grab bag. All class members fill in "Food Group" column with the name of the correct food group. As an extension to the lesson, using half cup, cup, tablespoon, teaspoon, scales and weight objects, have students identify the correct measuring device. Example: a student pulls out the deck of cards. The class would respond, "That is the portion size for a serving of meat." Class members would write Meat under the

“Food Group” column on their sheets. Students should identify the scales as the weighing device for ounces of meat.

Alternate Procedure: Distribute “Puzzle Pieces.” By matching the jigsaw puzzle pieces, students can become aware of appropriate portions of various foods. Display the completed puzzles in the classroom. Invite parents and community member to view the display.

8. Have students complete “Food Math” activity from Level 2, Lesson 2 of MyPyramid for Kids. See Materials Needed for Web site.
9. Encourage students to monitor serving sizes in accordance with their findings in this activity.
10. Note that serving sizes are measured using standard units of measurement of volume (i.e., cups, tablespoons, ounces, etc.). Introduce the idea that when farmers produce and sell their products, they measure using different standards of measurement. For example, we purchase milk by the pint, quart or gallon. Farmers sell milk by the pound. The comparison of these measurements is that there are 8.6 pounds of milk in one gallon. If you live in an area with a dairy farm, arrange a farm tour with a dairy farmer. If not, take students on a virtual tour of a dairy farm via the Internet.
11. When farmers sell sweet potatoes, they are paid by the bushel. Challenge students to find out how many sweet potatoes or pounds of sweet potatoes are in one bushel. It is important to make the point that many measurements of produce are approximate.
12. For physical activity, have students participate in “Run the Rainbow Challenge: Hot Potato and More!”

Materials Provided

- “Portion Size Guide”
- “Puzzle Pieces”
- “Run the Rainbow Challenge: Hot Potato and More!”

Materials Needed

- Manipulatives located in “The Farmer Grows a Rainbow-Main Course” lesson
- “Level 2, Lesson 2: Food Math” from MyPyramid for Kids found at http://teamnutrition.usda.gov/resources/mpk2_lesso2.pdf
- Items from grab bag activity: computer mouse, 7 cotton balls, a baseball, a cupcake liner, tube of chap stick, or lipstick, 9-volt battery, deck of playing cards, a ping pong ball, a tennis ball, a postage stamp, a film canister, 1 cup measurer, ½ cup measurer, 1 tablespoon measurer, 1 teaspoon measurer
- Real or play food items (at least one item from each of the six food groups)

Discussion Questions

1. What is MyPyramid?
2. What are the different sections of MyPyramid called?
3. What does portion size mean?
4. Why is it important to eat the right portion sizes?
5. Name different examples of measurement units.

Related Activities

1. Challenge students to keep a diary of all foods eaten for one week. Compare to personal MyPyramid Plan. Using their lists, ask them to 1. Highlight fruits and vegetables and 2. Underline foods produced by farmers in your state.
2. The Food Pyramid Bead Activity by Wisconsin Agriculture in the Classroom located at the end of the "The Farmer Grows a Rainbow-Main Course" lesson.
3. The lesson "Be a Food Explorer" located in the health section of this curriculum guide.
4. The lesson "Build a Burger" located in the health section of this curriculum guide.
5. The lesson "The Story of Milk" located in the language arts section of this curriculum guide.

Book Resources

1. "Growing Colors" by Bruce McMillan
2. "The Milk Group" by Mari Schuh
3. "The Meat and Beans Group" by Mari Schuh
4. "The Vegetable Group" by Mari Schuh
5. "The Grain Group" by Mari Schuh
6. "The Fruit Group" by Mari Schuh
7. "A Fruit and Vegetable Man" By Roni Schotter
8. "Being Active" by Mari Schuh
9. "Good for Me and You" by Mercer Mayer

Acknowledgement: This lesson was provided courtesy of North Carolina Agriculture in the Classroom and the United States Department of Agriculture.

Answer Key

Portion Size Guide

Food Item	Food Group	Measurement	Comparison
Chopped vegetables	Vegetable	½ cup	Computer mouse
Fresh fruit	Fruit	½ cup	7 cotton balls
Raw, leafy vegetables	Vegetable	1 cup	A baseball
Cooked rice or pasta	Grains	½ cup	Cup cake liner
String cheese	Milk	2 oz.	Tube of chapstick or lipstick
Hard cheese	Milk	1 ½ oz.	A 9-volt battery
Meat	Meat & Beans	2-3 oz.	A deck of playing cards
Salad dressing	Oils	2 T.	A ping pong ball
Milk or Yogurt	Milk	1 cup	A tennis ball
Apple or peach	Fruit	1 medium	A tennis ball
Ice cream	Milk	½ cup	A tennis ball
Broccoli or mashed potatoes	Vegetables	1 cup	A fist
Butter	Oils	1 t.	A postage stamp
Nuts	Meat & Beans	1 oz.	Amount you can hold in one hand
Peanut butter	Meat & Beans	2 T.	A film canister

Run the Rainbow Challenge: Hot Potato and More

A single baked sweet potato contains many nutrients needed to sustain good health and support growth. Sweet potatoes are a great source of vitamin E. They are virtually fat-free. A medium baked sweet potato contains four times the recommended daily allowance of beta-carotene when eaten with the skin on.

Show students video on sweet potatoes at:

<http://www.ncsweetpotatoes.com/index.php?option=content&task=view&id=113>

To emphasize the activity component of MyPyramid, allow second graders to play “Hot Potato and More!” using a real sweet potato. Pass or toss a sweet potato around the circle using a timing device. The student holding the sweet potato when the timer sounds must name a health benefit derived from eating foods from the Vegetable group.

Alternative Procedure- Select a food item from each of the food groups (i.e., apple for the Fruit group; a bag of dried beans for the Meat and Beans group; a sweet potato for the Vegetable group; an empty margarine tub for the Oils group; empty yogurt or milk carton for the Dairy group; a mini-box of cereal for the Grains group). Follow the same rules of play except have six items moving simultaneously and six responses each time instead of just one.

Portion Size Guide

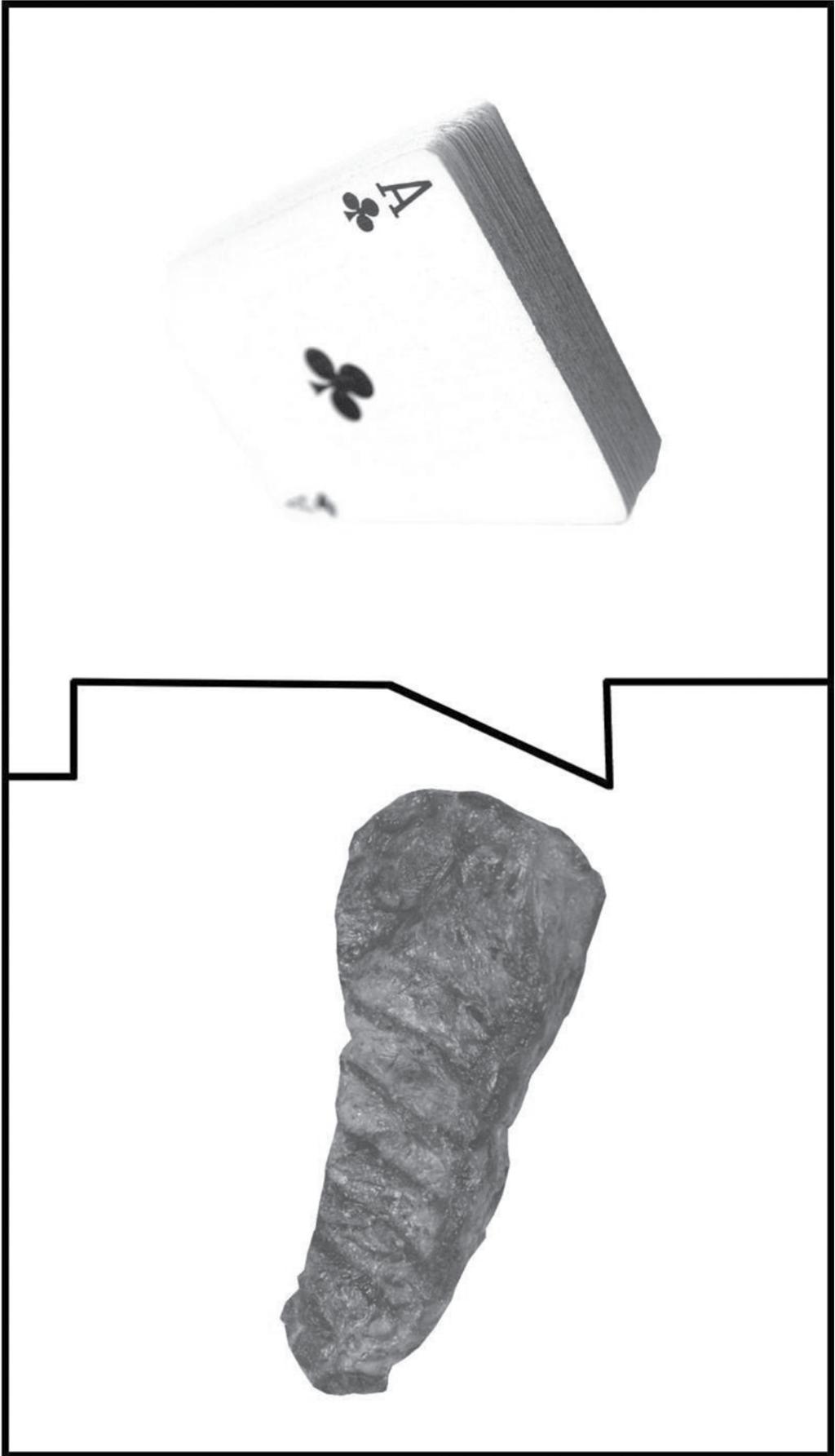
Directions: Complete the chart by filling in the correct food group for each food item. The completed chart may be used as a guide to help you understand proper portion sizes.

Food Item	Food Group	Measurement	Comparison
Chopped vegetables		½ cup	Computer mouse
Fresh fruit		½ cup	7 cotton balls
Raw, leafy vegetables		1 cup	A baseball
Cooked rice or pasta		½ cup	Cup cake liner
String cheese		2 oz.	Tube of chapstick or lipstick
Hard cheese		1 ½ oz.	A 9-volt battery
Meat		2-3 oz.	A deck of playing cards
Salad dressing		2 T.	A ping pong ball
Milk or Yogurt		1 cup	A tennis ball
Apple or peach		1 medium	A tennis ball
Ice cream		½ cup	A tennis ball
Broccoli or mashed potatoes		1 cup	A fist
Butter		1 t.	A postage stamp
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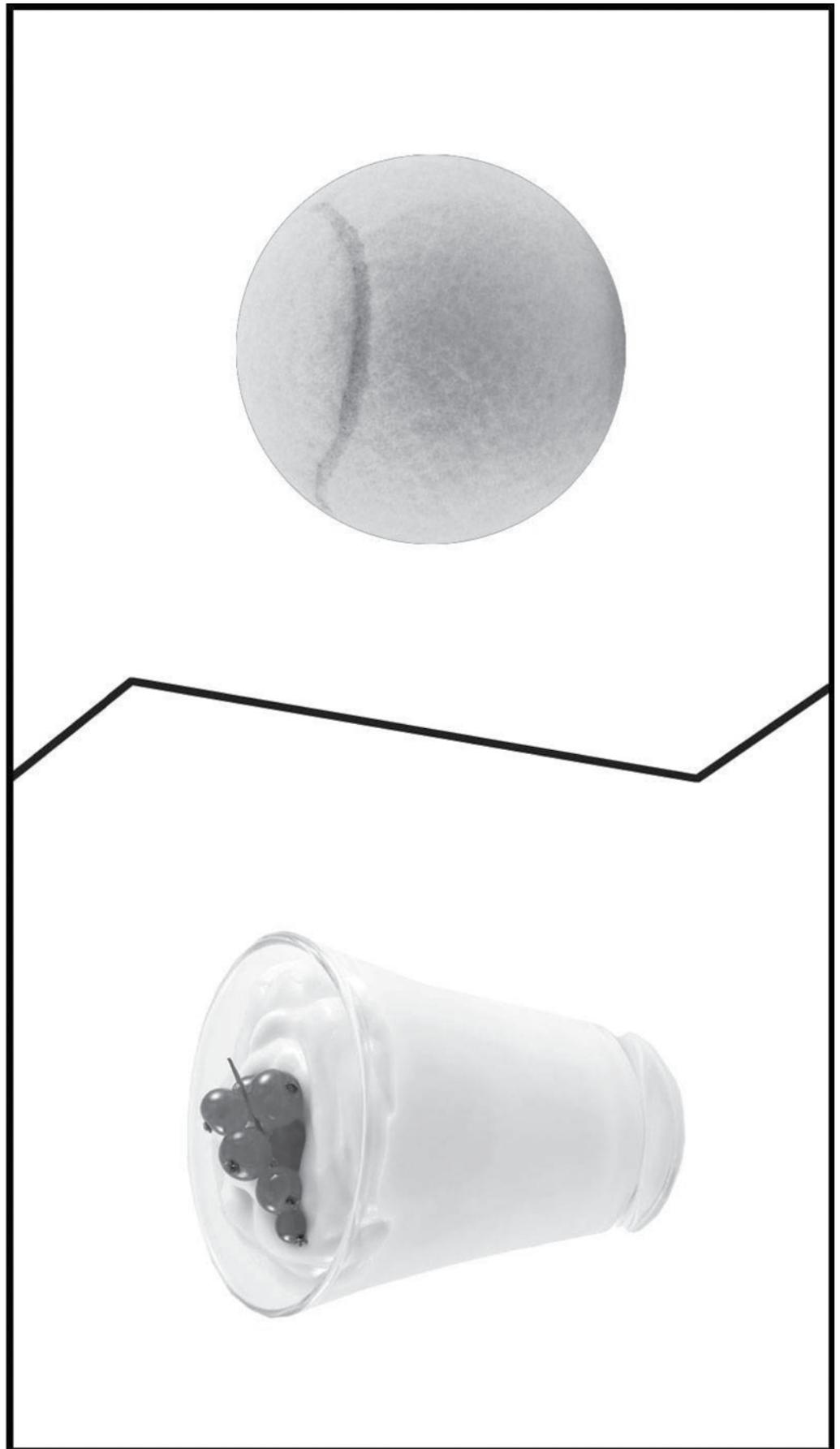
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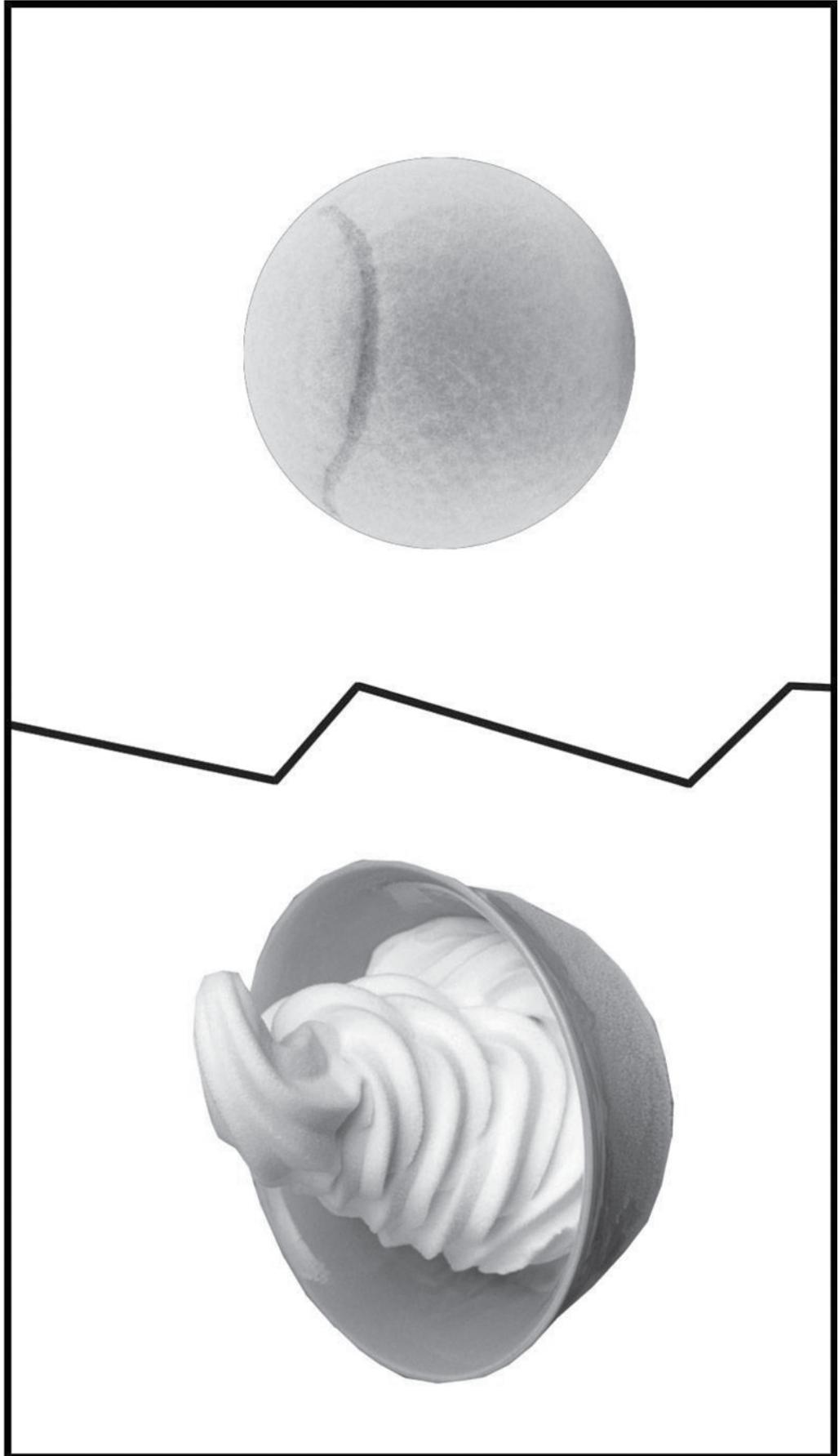
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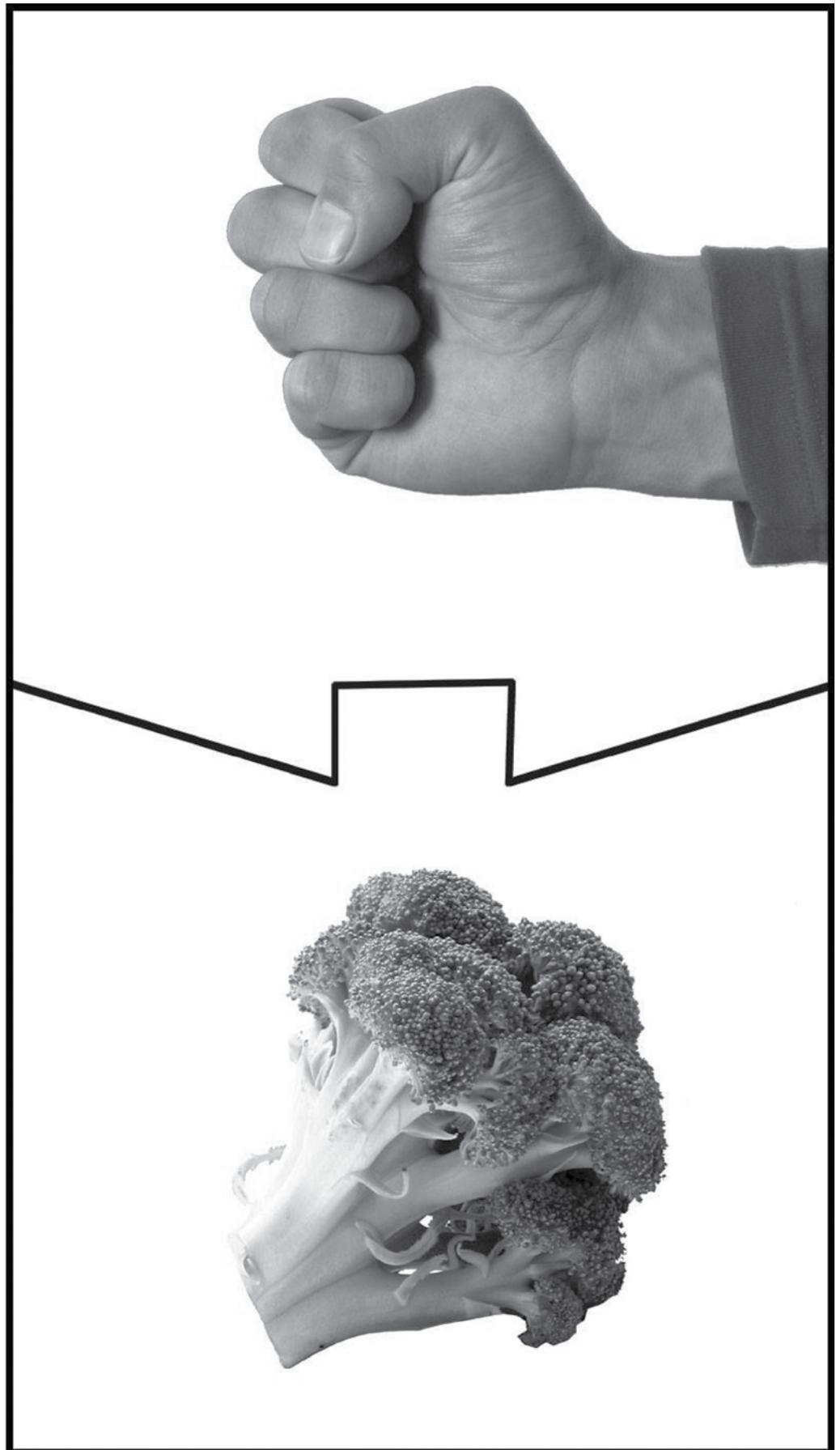
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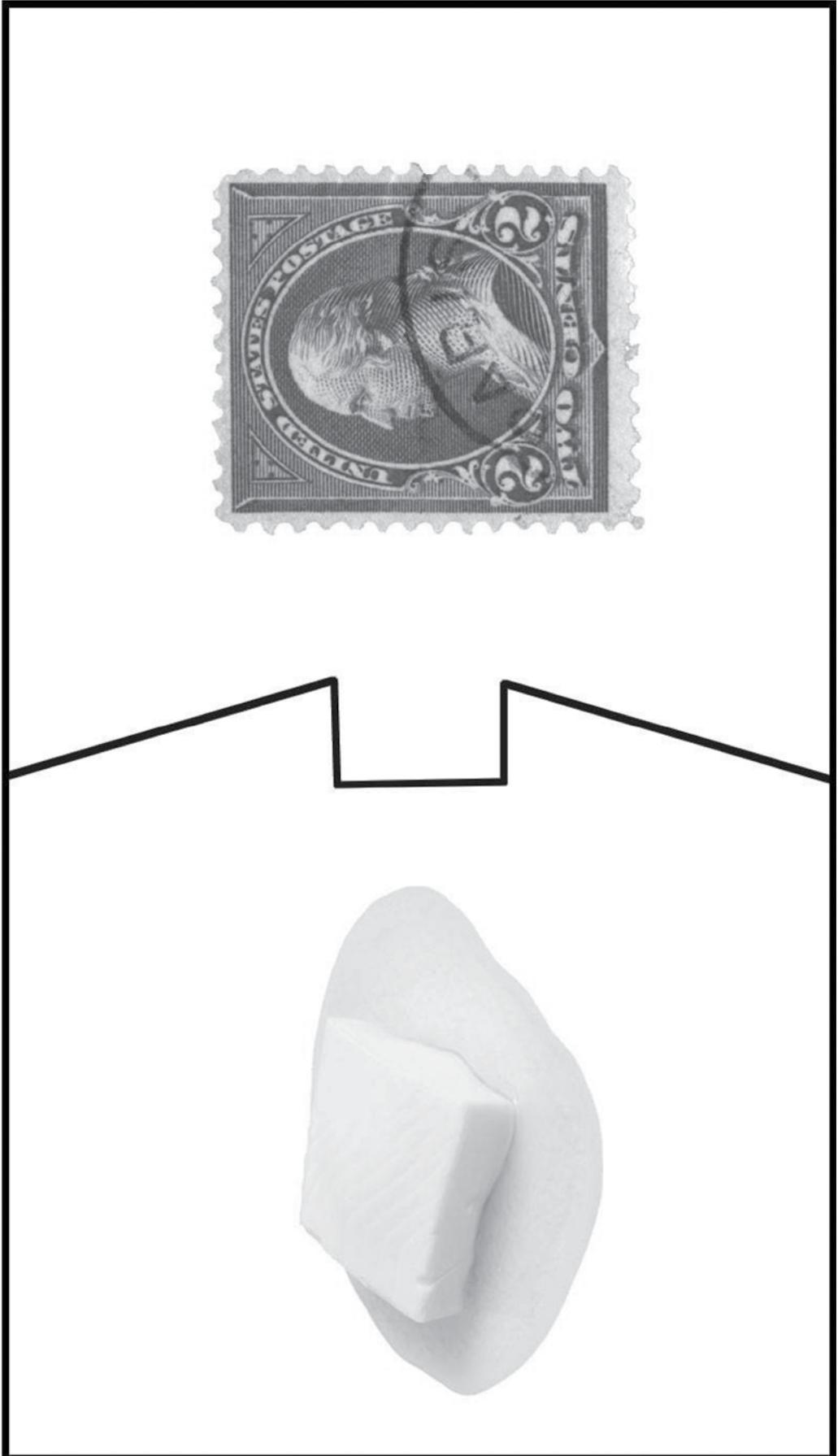
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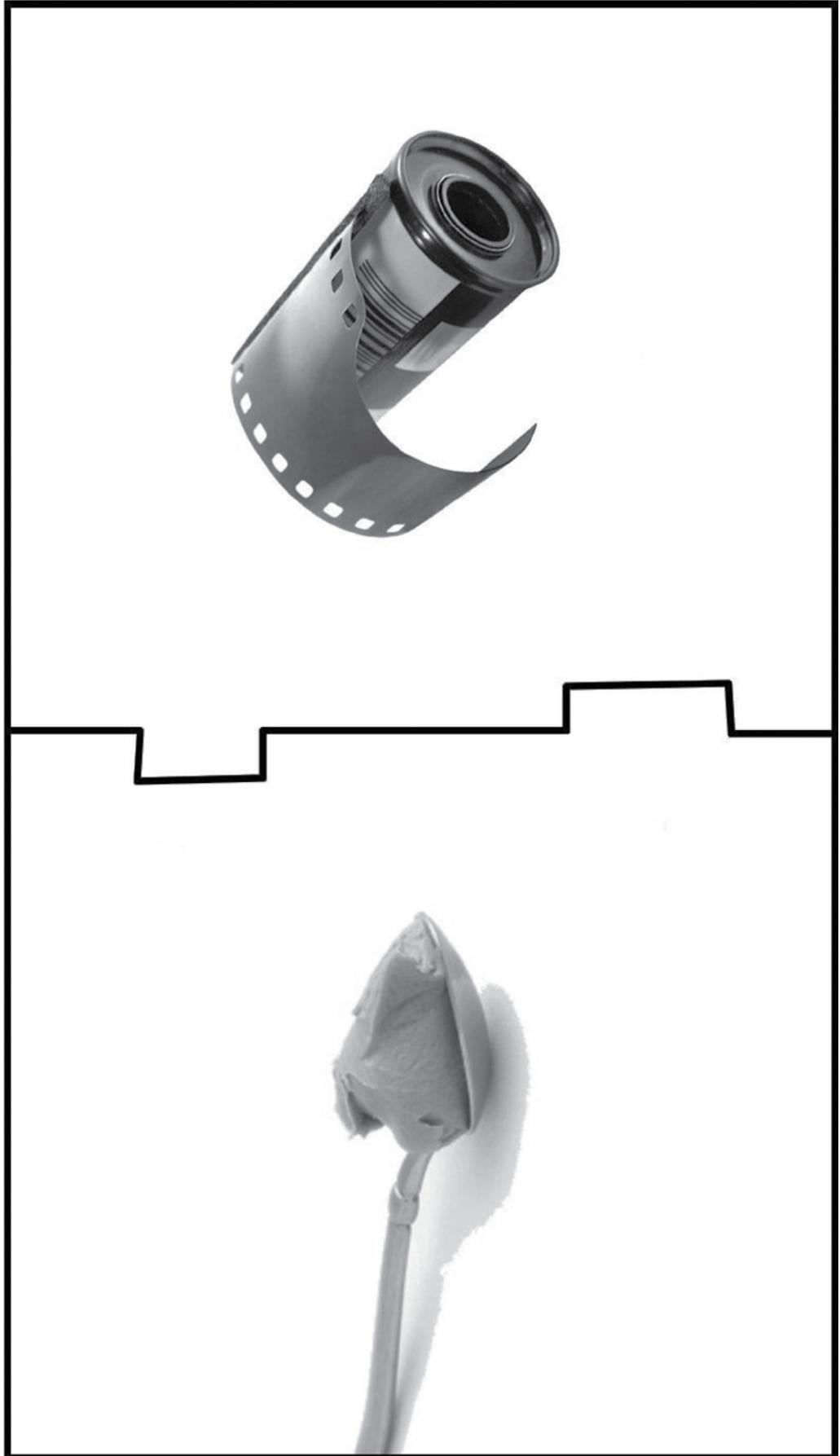
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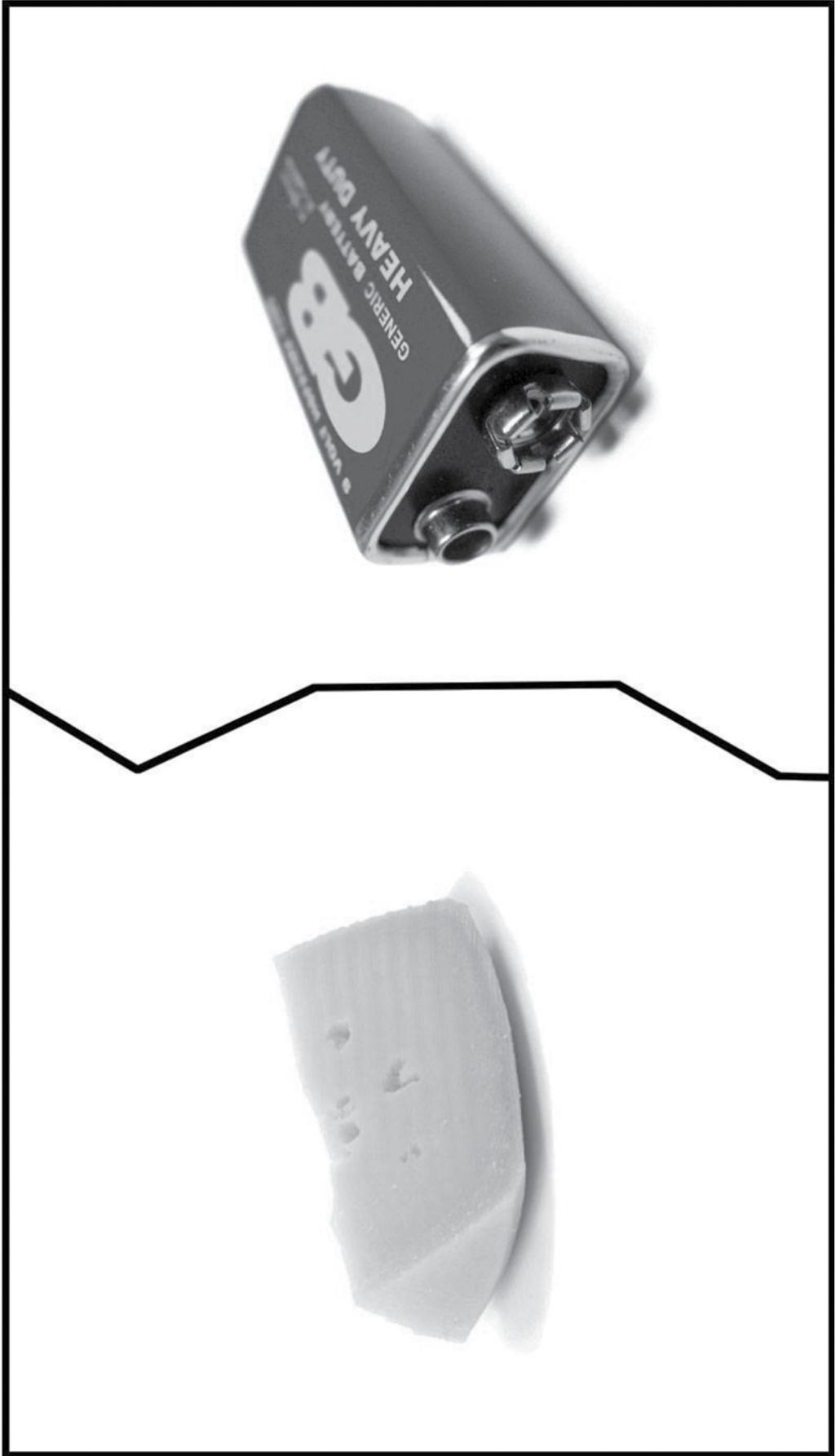
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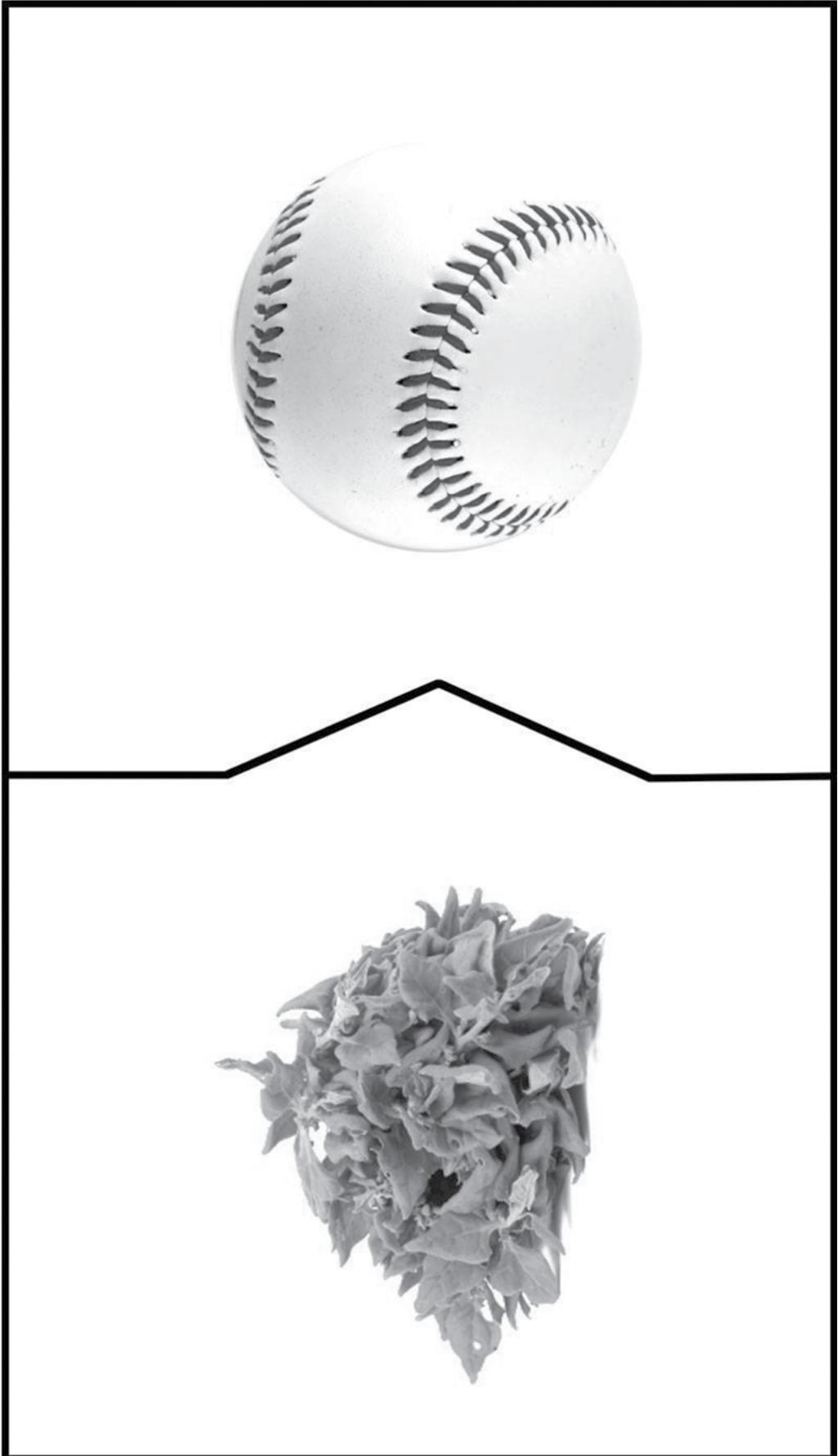
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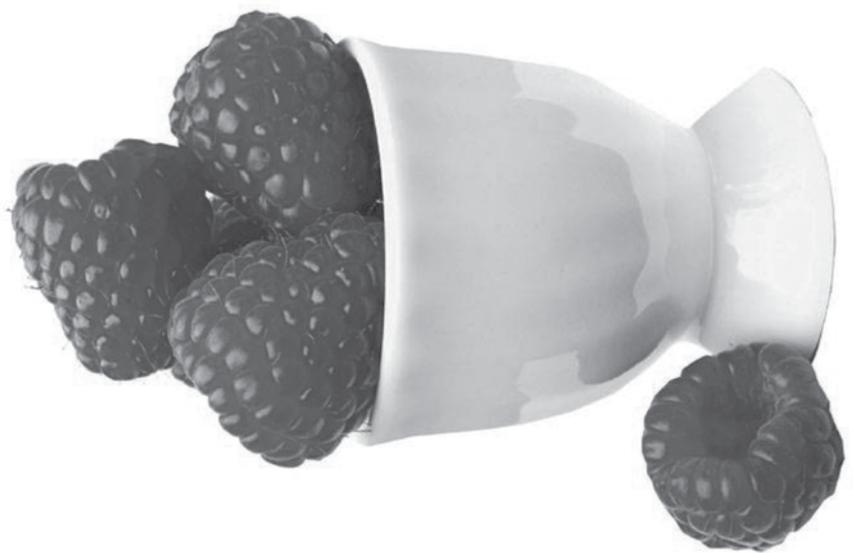
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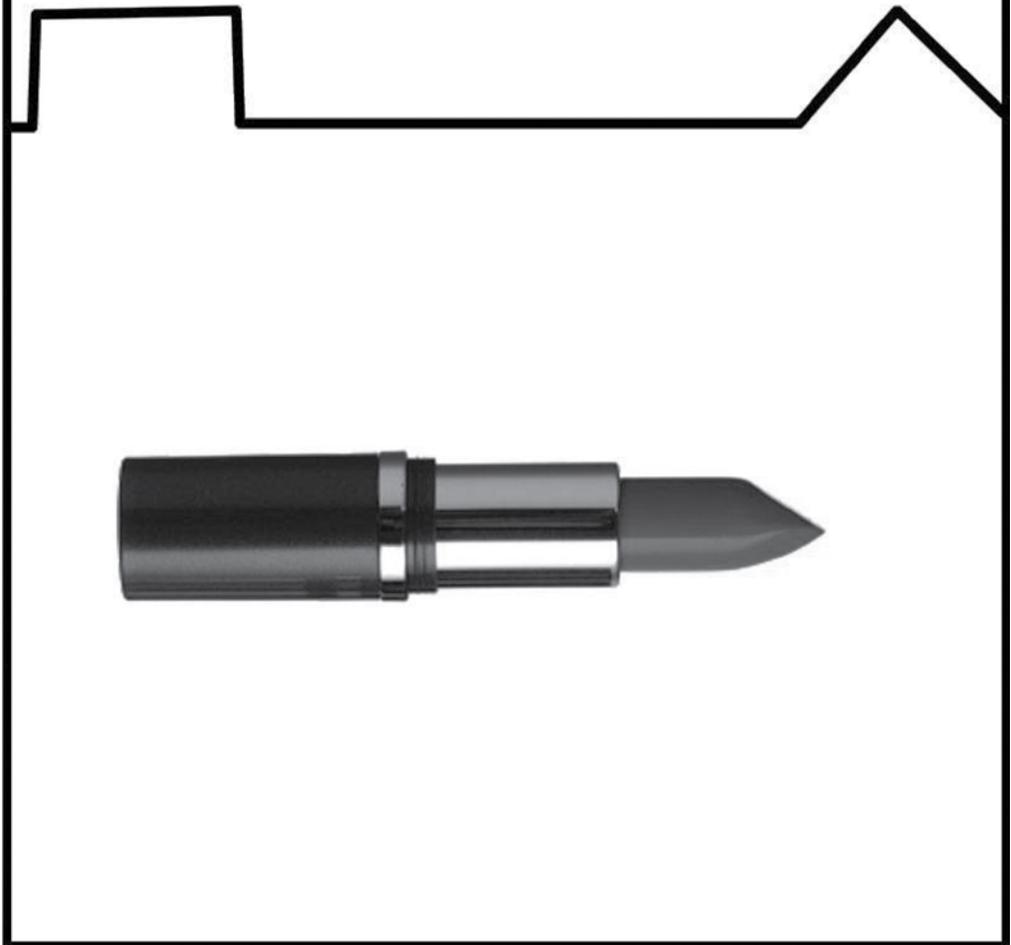
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