

# Jr. Chef Club

## Sippin' on Smoothies

### Lesson 3



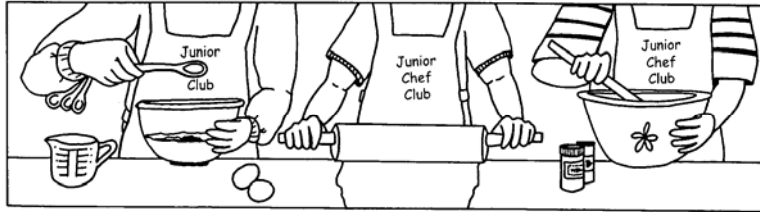
### Objectives

Students will be able to:

1. State the main function of calcium in the body.
2. Identify three foods rich in calcium and daily requirements.
3. List two tips for using a blender safely.
4. Explain why perishable foods must be kept refrigerated.

### EALR Integration

EALRS	Program Integration
<u>Reading 1.3</u> Build vocabulary through wide reading.	Read recipe instructions.
<u>Reading 3.2</u> Read to perform a task.	Read recipe, measure and prepare food.
<u>Writing 2.2</u> Write for different purposes—to name something and/or explain concepts and/or convey technical information.	Name five calcium-rich foods on “Them Bones” worksheet. Complete one of the optional writing activities.
<u>Math 1.2</u> Understand apply concepts and procedures from measurement.	Measure recipe ingredients.
<u>Communication 1.2</u> Listen and observe to gain and interpret information.	Use <b>MyPyramid</b> to choose nourishing foods. Observe and do food preparation.
<u>Health and Fitness 1.2</u> Safely participate in a variety of developmentally appropriate physical activities.	Participate in bone-bank relay.
<u>Health and Fitness 1.4</u> Understand nutrition and nutrients and how they affect physical performance and the body.	Learn how calcium intake affects peak bone mass.
<u>Health and Fitness 2.1</u> <u>Recognize</u> patterns of growth and development.	Observe amount of calcium in bones at different life stages.
<u>Economics 1.1</u> Comprehend key economic concepts and economic systems.	Tropical and out-of-season foods take many resources to get to this country, making them cost more.



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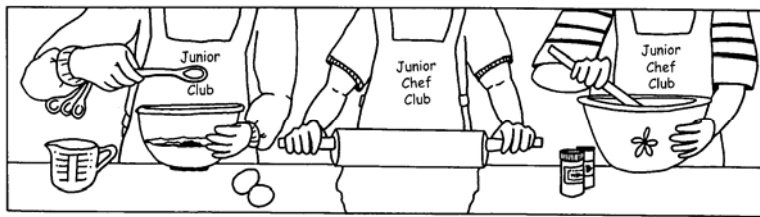
### Classroom Supply List

#### VISUAL AIDS

- MyPyramid Poster
- Apron cards showing calcium-rich foods and weight-bearing activities
- Food Models for Recipe Ingredients
- Thermometer poster showing danger zone for germ growth
- Refrigerator Thermometer
- Cardboard food models of a complete meal plus dairy and non-dairy calcium sources
- Examples of food labels of calcium-fortified foods such as orange juice
- Clear plastic bags showing amount of calcium in bones at different stages of life (newborn, elementary student, teenager, adult)
- Milk Group "Gradient" Poster with food models for each section
- Bone Models (NASCO) if available
- World Map

#### HANDOUTS AND TEACHING SUPPLIES

- Lesson Script
- Objectives and EALRs sheet for teachers
- Incentive for students (e.g. skeleton bookmarks, tooth key chains, little skeletons, etc.) from [www.OrientalTradingCompany.com](http://www.OrientalTradingCompany.com)
- Level I Cookbook, pp. 15–16
- Worksheet in Cookbook—Them Bones
- Calcium bone banks
- "Calcium" for the bone banks
- Two 1/2-cup scoops
- Food models and pictures of activities for the bone bank relay
- Handout: Safe Temperatures (optional)
- Parent Newsletter
- Writing Assignments (Optional):  
The Calcium Story



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### Cooking Supply List

#### **FOOD SUPPLIES**

To serve 25-30 students:

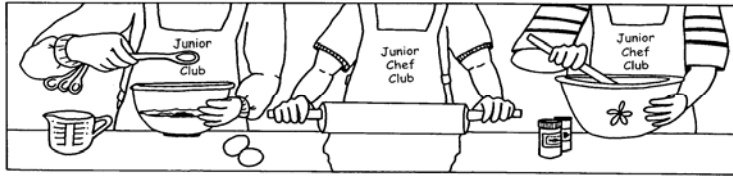
- 4 ripe Bananas
- 4 cups frozen strawberries
- 4 cups vanilla low-fat yogurt
- 4 cups Orange Juice
- 4 teaspoons Vanilla Extract

#### **COOKING SUPPLIES**

- Blenders - 2
- Liquid measuring cup - 2 each
- Measuring spoons - 2 sets
- Rubber spatulas - 2
- Extension cord with 2 outlets
- Paper towels
- Plastic gloves-adult and kid size
- Pitcher for serving
- Ice chest/insulated bag
- Ice packs
- Plastic 1 quart containers for juice
  
- Cooking Table Notes
- Teacher tip sheet for cooking

#### **SERVING SUPPLIES**

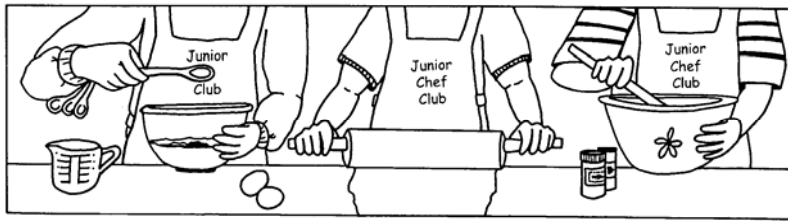
- Apron
- Small paper cups - 5 ounce



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### Preparation Outline

<p><b>Preparing Visual Aides</b></p>	<ul style="list-style-type: none"> <li>* <b>Apron cards:</b> Use food model pictures (such as from Dairy Council) and/or pictures of foods rich in calcium that are about six inches square. Use similar-sized pictures showing children being physically active (walking, running, playing ball, etc.) Laminate. Punch hole and attach to apron with safety pins. Use 6–8 cards.</li> <li>* <b>Thermometer poster:</b> Same as the one used in Lesson 1.</li> <li>* <b>Food label examples:</b> Collect several food labels with a blue banner on them indicating that they have been fortified with calcium. Choose 100% juice, soymilk and low-sugar cereal labels.</li> <li>* <b>Calcium bags:</b> See “Educator Information” for details on making these bags.</li> <li>* <b>Bone banks:</b> 2 one-gallon plastic jars with “Bone Bank” sign</li> <li>* <b>“Calcium” for bone banks:</b> two one gallon bags of white cornmeal. Put a ½ cup scoop in each bag.</li> <li>* <b>Milk Group Gradient poster:</b> Make a poster with a blue triangle in the shape of the one on MyPyramid. Make two dashed lines across the page, separating the blue triangle into thirds of equal size. Put Velcro dots in each third, spaced far apart. Attach food pictures of foods that are appropriate for each section such as: Nonfat or low-fat milk and nonfat plain yogurt in the lower level, 2 percent milk and reduced fat cheeses in middle level, whole milk and yogurt, regular cheeses and ice cream for the upper level.</li> <li>* <b>Food models and activity pictures:</b> Prepare as described in Educator Information.</li> </ul>
<p><b>Prepare Food Preparation area</b></p>	<p>Use fresh sanitizing solution to clean food preparation area (mist surfaces, let set one to two minutes then wipe with clean paper towel; throw away toweling) and cover with parchment or waxed paper. Set out all cooking equipment, gloves and ingredients needed. (Keep chilled ingredients in refrigerator or ice chest until needed.)</p>



# Jr. Chef Club Sippin' on Smoothies Lesson 3



## Lesson Script

### INTRODUCTION

Set up large MyPyramid poster.  
Smile and greet Club members; have them say the password.  
Today we'll make Tropical Smoothies. Smoothies are made with foods from the fruit and milk groups so we'll be taking a closer look at the Milk Group today.

### Review of Last Week

What did we make last week? Master Mix biscuits.

### Who made something from Master Mix at home?

Group#	#1	#2	#3	#4	#5	#6	#7	#8
Used Master Mix at home								

Let the students share what they made at home with the Master Mix. Collect papers of those who completed the assignment of writing a paragraph about their experience.

Who remembers what food group something made with Master Mix belongs in? Yes, the Grain Group – the orange triangle of **MyPyramid**.

### MYPYRAMID

Note to Educators: Throughout the teaching of **MyPyramid**, base your comments about how much children should eat from each food group on the actual amount of food—cups, ounces, portions, etc. for children their age. Do not base their eating plan on calories. Do not have them look up on charts how many calories they should be eating, and then figure out how much food from the different food groups they should be eating to get that amount of calories. This can be done ahead of time for the age and gender of the children you're working with, and then tell them the actual food amounts.

Research shows that if children start to be over-concerned about calories they may restrict their food intake unnecessarily and develop disordered eating behaviors. Grade school children should not be "dieting" and this tends to happen if they think in terms of calories. You may explain what a calorie is, a unit to measure food energy, and that we need to balance the foods we eat (calories in) with the activity we do (calories out). AVOID basing their eating plan on calories.

Note: Except for calcium, individual nutrients are not discussed here due to time constraints—they will be covered in future lessons.

Last week we learned the names of all the different food groups. Raise your hand if you can tell us what they are. Praise correct answers. And of which foods do we need to eat the most? (Foods represented by larger triangles and foods from the base of each triangle—less processed with little or no added fat or sugar.)

Today we'll find out more about the Milk Group of **MyPyramid**. Raise your hand if you can name some foods from the Milk Group (put food models near the Milk Group triangle as students say them).

Milk Group foods are considered “Grow” foods because they help our body grow strong and keep it strong.

Is the Milk Group's blue triangle large or small, compared to the others? Relatively small. That's because foods from the Milk Group have so many nutrients in just a little bit (concentrated) that we don't need a lot of the milk-based foods to get the nutrients we need. Children your age, 9 and older, need just 3 cups of milk or yogurt or a little cheese each day. Place the number card showing “3 cups” near the Milk Group. The behavioral message for the Milk Group is, “**Get Your Calcium-Rich Foods.**” What is one way you could drink three cups of milk a day? (Have a cup of milk with each meal)

- Show examples of one cup or 1½ ounces of cheese.

Most of your choices in each food group need to be healthy, unprocessed, low in fat and low in sugar—remember, these would be the types of foods at the bottom (base) of **MyPyramid** in each food group. Then the symbol reminds you to eat foods with fat and sugar less often as you move up the color band because it shows there is less room for those types of food. What foods do you think would be in the base of the Milk Group? Show Milk Group Gradient Poster and be ready to place Velcro-adhered foods pictures in the bottom, middle and top of each colored triangle as students call out foods. As foods are mentioned, discuss whether they are low, medium or high in fat and/or sugar and place their picture accordingly to where they belong on the Gradient poster.

- For this age, use 1 percent or nonfat dairy products because they are better for your heart than 2 percent or whole milk because they have less of the fat that harms arteries.

Summarize: It's important for Jr. Chefs to choose foods from the base of each food group to stay healthy. When making a meal we should aim to eat at least one food from each food group. Show food models of a complete meal.

### **Milk Group and Calcium**

Have student helpers distribute recipe books.

The recipe we'll make today is Tropical Smoothies; turn to page 15–16 in your Cookbook. The smoothie recipe uses foods from the Milk Group. Look at the recipe and raise your hand if you can name an ingredient from the Milk Group.

If time, ask: How many have eaten one dairy product, such as milk, yogurt or cheese, so far today? (If class is after lunch, ask the question as “two or more” so far today.)

Group#	#1	#2	#3	#4	#5	#6	#7	#8
Dairy Breakfast - 1 Lunch - 2								

Raise your hand if you know why it's important to drink milk? (Strong bones) The mineral in milk and dairy products that we need for strong bones is calcium.

### Calcium

The slogan for the Milk Group is, "**Get Your Calcium-Rich Foods.**" Why does the slogan say "calcium-rich"—why do you think calcium is important for our health?

Discuss calcium. Refer to educator information. Highlight these points:

- The only way we get calcium is from eating it—the body cannot make it.
- Show the amount of calcium in a newborn's bones, an elementary student's, a teenager's and an adult's.
- Functions of calcium—strong bones, blood clotting, muscle relaxation, and other things the body needs to do. Calcium is only stored in the bones while you're young. Bones serve as a "savings account" for calcium. Strive to build a big savings account of calcium in your bones so they will last all your life. What happens if you don't eat enough calcium in a day to relax your muscles and do all the things that calcium must do? Where will your body get the calcium it needs to relax your muscles or clot your blood if you cut yourself? From your bones. Whenever your body needs calcium and you have not eaten any lately, it will go straight to your bones and pull it out of them, making them weaker. So everyone needs to eat plenty of calcium each day—children are making bones/deposits into their bone bank savings account, adults are saving their bones and not making withdrawals from their bone bank account.
- Show bone models if available. Normal and osteoporotic.
- Show clear plastic bags of the amount of calcium in bones at different life stages.
- Re-emphasize that children 9 and older need 3 cups of dairy products each day to build peak bone mass.
- Non-dairy calcium sources; show cardboard food models of calcium-rich foods and sample labels of calcium-fortified foods such as juice, soy milk, certain low-sugar cereals.

Explain importance of activity to bone building. Physical activity helps bones become strong and helps bones store calcium. Weight-bearing activity, where we work against gravity (any activity in which we walk or run or jump, etc.) are best for building bones. Other activities, such as swimming and bike riding, are great to do, although they are not a weight-bearing activity. Why? (Because most of the body weight is held up by the water; or by the bicycle seat)

### FOOD PREPARATION

- Have the Jr. Chefs for the day come up, wash hands and put on gloves.
- Review reading a recipe

- Follow the recipe step-by-step to measure, mix, and prepare the food. You will need to look back at the recipe many times.
- Have students read the recipe aloud first and identify all the ingredients and equipment as it is read.
- Explain **Blender Safety**
  - Blenders are powerful, use carefully and **with an adult**.
  - Always **read the instruction book before using** an appliance for the first time.
  - Blender **blades are as sharp as knives**; handle carefully. **No hands or utensils inside!**
  - Put liquids in first.
  - Make sure the blender has **completely stopped** before taking off the lid or removing from motor.
  - Blenders work quickly. Be careful not to over-blend.
  - Never leave a blender running when no one is watching it.
- Have Jr. Chefs measure ingredients into each blender.
- Once all the ingredients are in the blender, remind students of how blenders must be used safely to avoid injury.
- Blend. Have the Jr. Chefs count for the appropriate number of seconds stated in recipe while blender is on.

#### **If adding ice—optional**

- Warn about using ice if you're adding ice to the smoothie. Don't be a blender bender!  
Ice cubes can blend the blades or crack the blender container. Use crushed ice and make sure there is at least one cup of liquid before adding ice. To make crushed ice, put ice into a plastic baggie and hit on a hard surface or tap with a hammer.
- Check for food allergies
- Pour Tropical Smoothies into a pitcher that kids can pour from easily. Have one Jr. Chef fill small paper cups  $\frac{3}{4}$  full OR LESS while the other cooks serve the cups to the class.
- Ask students how they could make a smoothie if they don't have a blender at home. A food processor will also work. If students don't have that, they could try using an electric mixer. Chill ingredients first so that ice does not have to be used. If an electric mixer is not available either, mash the fruit in a bowl, put into a jar with a tight fitting lid. Add other ingredients, cover tightly and shake.

## **NON-COOKING STUDENTS' ACTIVITY**

### ***Calcium Bone Bank Relay***

Explain that we're going to do a bone-building, calcium-bank relay. Show the "bone banks" and examples of food models and activities with the numbers on the back. Explain that each picture of a food or an activity has a value from 1–3 that represents how well this food or activity builds strong bones (foods have low, medium or high levels of calcium—1, 2, 3—and activities are either weight bearing or not).

- Divide class into two teams. Give each student a food or activity picture. Make sure students understand the significance of the numbers on the backs of the cards. This will be a relay race between the two teams. Students are to hop up to the bone banks and tell the educator at their bone bank what their food or activity is and what the number is on the back. (Hopping is a bone-building activity!) The educator scoops that number of scoops of "calcium" into the bone bank. The student returns to his/her team and touches the next person to go. You will need one adult or student helper at each "bone bank"—yourself and one other person.

## **TASTE AND EVALUATE TROPICAL SMOOTHIES**

- Jr. Chefs serve smoothies.
- While students drink them:
  - Have students fill out the food evaluation in their cookbooks.
  - Have students color in the food groups that were in today's Tropical Smoothies on the pyramid in their cookbooks. (Fruit and Milk Groups)
  - Which nutrients were in our Tropical Smoothies? ("Glow" and "Grow" foods, from the Milk Group for calcium and from the Fruit Group for Vitamin C. Note: Vitamin C hasn't been presented yet, so tell them this fact, rather than ask.)

## **OPTIONAL DISCUSSION TOPICS & ACTIVITIES**

While they finish drinking smoothies, discuss the following, as time allows.

### **Food Safety & Milk Products**

What would you do if you had leftover smoothie? (Refrigerate) Explain that most dairy foods are perishable—that means they can spoil or go bad if they are not put in the refrigerator. If they are left at room temperature, what might happen to them? Bad bacteria could grow and make you sick if you ate it. Show thermometer poster with red danger zone and/or distribute "Safe Temperatures" optional handout. Ask students what other kinds of foods are "perishable"? (Meat, fish, poultry, leftovers, many canned or bottled items once they are opened: don't let perishable foods sit at room temperature for very long - not more than 2 hours)

It's important that your refrigerator is cold enough. You can check it by keeping a thermometer in the refrigerator. Show example of refrigerator thermometer. Your refrigerator should be 40° F or colder. You can get a thermometer like this at the grocery store in the aisle where cooking utensils, such as measuring cups, are sold. Thermometers don't cost very much, usually less than \$5.00. If you get one, put it in the back of the refrigerator and check it every few days.

### **Food Origins and Transportation Discussion (time permitting)**

- Ask where ingredients come from—show on world map.
- **Bananas** originated in India and today are grown in Africa, Asia, Central and South America. Vanilla comes from long pods containing vanilla beans that grow on vines in Central America. **Strawberries** are native to North and South America. Some strawberries are grown here in Western Washington during the summers, but strawberries also come from warm areas with long growing seasons like Florida, California, and Mexico. **Milk and Yogurt** are produced locally in our state—especially around the Bellingham area. Optional question if time: has anyone lived in or visited any of these places?

### **Moving Food to You (time permitting)**

- Ask how foods get here from farmers and growers?
- It takes many workers, trucks, ships or airplanes plus fuel to run those vehicles, to get far-away foods to our table. To save energy and money, we can try to use local, in-season foods first. Discuss foods grown in Washington State.

### **WORKSHEET**

When students are finished drinking smoothies, complete “Them Bones” worksheet in cookbook.

### **Optional Writing Activity (Make into a worksheet if desired)**

Sally is a third grade girl. She wants to have strong bones. Write a story telling what Sally does to make her bones strong. Use the back of the page if you need more room.

In addition, during the next week, select a writing prompt on calcium. (See Writing Prompts in “Supporting Documents” section.)

### **Optional Reading/Writing Activity**

Complete “Bone-Up on Calcium” worksheet. Students read for comprehension and then write answers to questions.

### **SUMMARIZE**

Ask questions to determine if objectives were achieved:

- Why is it important to eat foods with calcium every day?
- What are some foods you can eat to get the calcium your bones need?
- How many servings of milk-type foods do kids your age need each day?
- What are two things to keep in mind when you use a blender safely at home?
- Why do things like yogurt and milk need to be kept in the refrigerator?

### **PARENT NEWSLETTER**

Distribute Parent Newsletter.

### **CLOSING**

Tell students that next week we'll make breakfast.  
Cheerfully close and have group say password.