

# 4-H Fun with Foods

## Level I



4-H Food & Nutrition

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COOPERATIVE EXTENSION

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# Lesson 4

## Beverages

Nothing is better than a hot drink on a cold day, or a blended drink on a hot day. Learning to use the stove top and blender safely are important in order to prepare these yummy drinks.

### Activity 1: Heating Milk & Making Hot Chocolate

#### Goal:

Compare methods for heating milk  
Learn how to heat milk without scorching



#### Materials Needed:

2 cups milk  
1 double boiler\*  
Ingredients as listed in selected recipe

1 small saucepan  
1 wire whisk

\* If you do not have a double boiler, you can use a glass or metal bowl fit over a pot of simmering (NOT BOILING) water. Place the milk in the bowl.



1. Heat 1 cup of milk in the small saucepan over medium heat. Watch it carefully so that it does not boil over or scorch. Heat until bubbles appear around the edge of the pan and watch to see if a skin begins to form on the top of the milk. Use a spoon to lift off skin.
2. Heat 1 cup of milk in a double boiler (a double boiler is basically two sauce pans - the larger pan is on the bottom and is filled with a couple inches of water, the smaller sauce pan fits on top of this one and uses the heat from the water below to heat milk, melt chocolate or cook other food items which require gentle heat). If you do not have a double boiler, you can use a glass or metal bowl fitted over a pot of simmering water. Place the milk in the bowl.

3. As milk warms up, beat with a rotary beater or whisk to form a foam. Heat the milk until you are sure it is hot.
4. Compare the appearance of the two pans of milk.
5. Pour the milk from the two pans, and see if you can tell a difference in heating milk by the two methods.
6. After comparing the milk, use it to make homemade hot chocolate in Activity 2.



### Safety Tip

Place all pans so that handles are away from the edge of the stovetop. Protruding handles can be accidentally knocked or tipped off the stove, causing serious injuries.

### Answer these Questions:

- ✓ What caused the milk heated over direct heat to be covered with a skin?
- ✓ What prevented the formation of skin on the milk heated in a double boiler?

### Explanation:

Milk contains vitamins, minerals, protein, and if using whole milk, fat. Heat makes protein coagulate or clump together. High heat may cause scorching or burning of protein. High heat causes the protein to toughen. The skin that forms on top of the milk and the material you see sticking to the sides and bottom of the pan is protein that has changed due to heat. This will scorch very easily when heated directly over the burner.

Lower heat in the double boiler prevents scorching. Stirring will help to prevent the settling of protein on the bottom and side of the pan. Whipping with a beater makes bubbles on the milk and keeps skin from forming.



### Activity 2: Hot Chocolate

#### Goal:

Learn how to make homemade hot chocolate.




#### Materials Needed:

Double boiler\*  
Measuring spoons  
Egg beater

Wooden spoon  
Measuring cups  
Ingredients as listed in recipe

\* If you do not have a double boiler, you can use a glass or metal bowl fit over a pot of simmering (NOT BOILING) water. Place the milk in the bowl.



## Recipe : Homemade Hot Chocolate

Yield: 2 servings

**Ingredients:**

1 tablespoon cocoa                      3 tablespoons sugar  
2 cups milk

**Directions:**

1. Blend cocoa and sugar in bowl.
2. Warm milk with a double boiler if you have one. Or, use a glass or metal bowl fit over a pot that has simmering water in it. Put the milk in the bowl. (See activity 1).
3. Add cocoa mixture to warm milk and blend well.
4. Use beater just before serving.



### Activity 3: Powdered Hot Chocolate Mix

#### Goal:

Learn how to make homemade powdered hot chocolate.



#### Materials Needed:

Mixing bowl


Measuring cups

Air-tight container

Large spoon

Measuring spoons

Ingredients as listed in recipe



## Recipe : Powdered Hot Chocolate Mix

Yield: 30-40 servings

**Ingredients:**

3 cups powdered sugar                      1 large box (4.6 ounces) instant  
2 cups instant chocolate milk mix              chocolate pudding mix  
(such as Nesquick)  
1 ½ cups non-fat instant dry milk

**Directions:**

1. Combine all ingredients. Stir thoroughly.
2. Store in air-tight container.

**To Serve:**

Add 2 heaping teaspoons of hot chocolate mix to 8 ounces of hot water, stir and serve.

## Activity 4: Using a Blender

### Goal:

Learn how to properly and safely use a blender.

### Materials Needed:

Measuring cups  
Blender

Measuring spoons  
Ingredients as listed in selected recipe

Select from one of the following three recipes, **or try them all!** You can make milk drinks from fresh milk, evaporated milk (canned), or from non-fat dry milk (powdered).



### Safety Tip: Using Blenders

- ✓ Make sure your hands are completely dry while using the blender. Never turn the blender on or off with wet hands. Also never use wet hands to plug or unplug a blender.
- ✓ Make sure the lid is on tight before starting the blender. Turn off the blender before removing the lid.
- ✓ Make sure the base of the blender is tightly secured before adding ingredients.
- ✓ Do not put spoons or other utensils in the blender while blender is on.
- ✓ Unplug the blender when you are not using it.



## Recipe : Banana Delight Shake

Yield: 4 Servings

### **Ingredients:**

1 banana cut into small pieces	1 carton (8 ounce) fruit flavored yogurt
1 ½ cups milk	¼ cup sugar
1 teaspoon vanilla	6 ice cubes or 1 cup crushed ice

### **Directions:**

1. Mix all ingredients in blender until ice is crushed and drink is thick.
2. Pour into glasses. Enjoy!



## Recipe : Dreamy Orange Smoothie

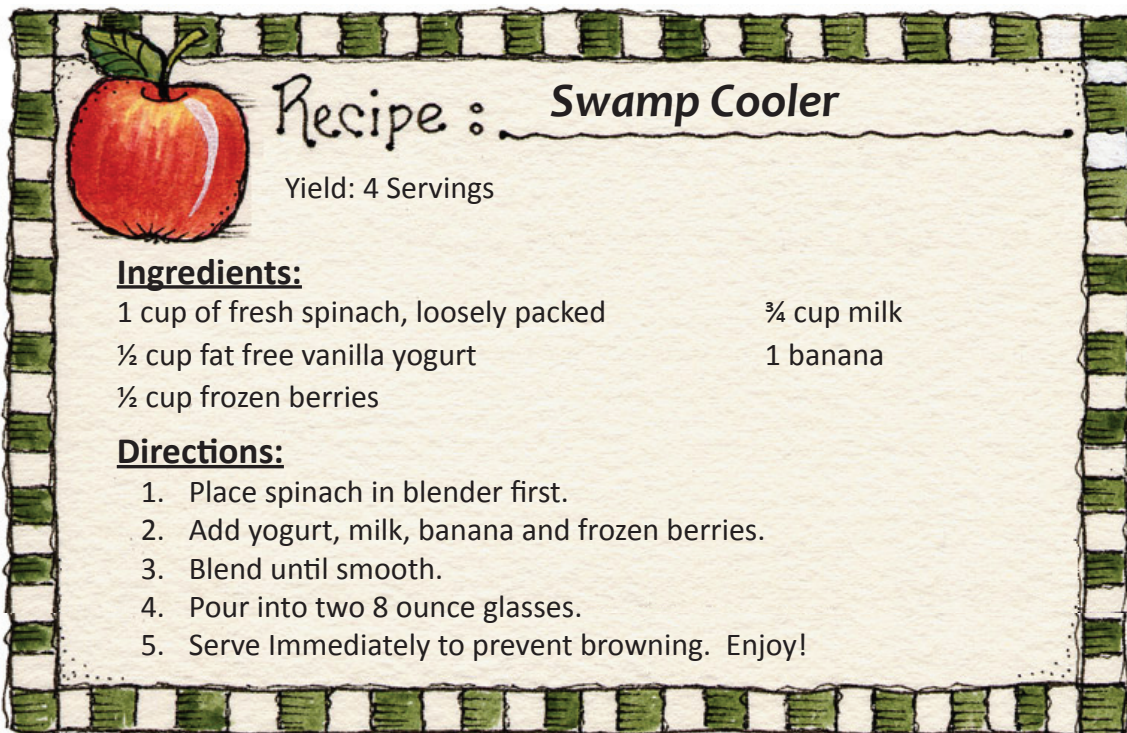
Yield: 4 Servings

### **Ingredients:**

1- 6 ounce can frozen orange juice	1 ½ cans (9 ounces) water
1 ½ cans (9 ounce) milk (using the orange juice can to measure)	¼ cup sugar
1 teaspoon vanilla	6 ice cubes or 1 cup crushed ice

### **Directions:**

1. Crush ice in blender.
2. Add all ingredients. Blend well.
3. Pour into glasses. Enjoy!



**Recipe :** *Swamp Cooler*

Yield: 4 Servings

**Ingredients:**

1 cup of fresh spinach, loosely packed	$\frac{3}{4}$ cup milk
$\frac{1}{2}$ cup fat free vanilla yogurt	1 banana
$\frac{1}{2}$ cup frozen berries	

**Directions:**

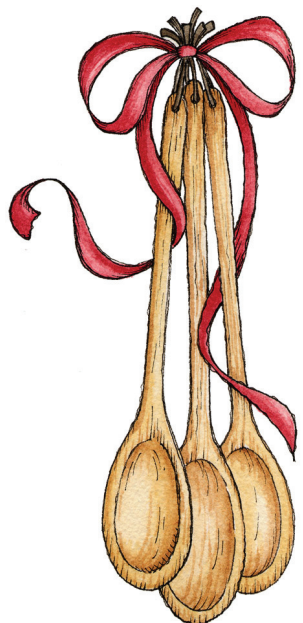
1. Place spinach in blender first.
2. Add yogurt, milk, banana and frozen berries.
3. Blend until smooth.
4. Pour into two 8 ounce glasses.
5. Serve Immediately to prevent browning. Enjoy!

**Nutrition Fact**

Other than making a fun green smoothie, why add spinach? Spinach is known as a “power” food. Keep an open mind about it. Eating spinach will help you meet your daily requirements for calcium, iron, folate and vitamin A.

**What have you learned?**

- ✓ How will you use what was learned?
- ✓ What happened that you didn't expect would happen?
- ✓ If you had it to do over again, what would you do differently?
- ✓ How do you prevent skin from forming on milk?
- ✓ What are some things you learned today that you can demonstrate to others?



**Recipe Sources**

- ✓ Tooele County Extension office
- ✓ Wasatch County Extension office
- ✓ <http://allrecipes.com>
- ✓ 4-H Fun with Foods by Georgia Lauritzen

**References and Resources:**

- ✓ Healthy Drinks/Healthy Kids
- ✓ eXtension
- ✓ [http://www.extension.org/pages/Healthy\\_Drinks](http://www.extension.org/pages/Healthy_Drinks)



## LESSON 4: FOR THE RECORD

### *Beverages*

#### MEETING

Date \_\_\_\_\_

Foods I prepared or helped prepare \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I demonstrated \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

This lesson taught me the following skills \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Some of the activities I tried \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Type of Food Prepared	# Times Prepared	To Whom Served	Hours Spent	# Served	Cost