February - Lesson Plan Grades 4-5

MY PYRAMID

Objectives

Identify foods in the meat and beans group.

Calculate how much of various food groups they need to meet the MyPyramid for Kids recommendations.

Analyze food choices from fast food restaurants, choosing lower fat alternatives.

Supplies Needed

February
Pick a **better** snack™ & **ACT** scorecard

4th & 5th Grade – "What's on the Label" worksheet

5th Grade – "What's the Score?" worksheet

Note to teachers

In the fall lessons, Pick a **better** snack the Color Way was the key message. For the months of December through February the focus will be on Pick a **better** snack™ and **ACT** for the fruit, vegetable, and physical activity lessons. In addition there will be one lesson each month on MyPyramid for Kids. This lesson will allow children to explore the new colorful kid's pyramid that was released in the fall of 2005.

USDA's Team Nutrition created classroom lessons to help children explore MyPyramid for Kids. They are available on the web at www.mypyramid.gov/kids. A classroom kit to accompany the lessons can be ordered. The MyPyramid lessons are to be used in the following order:

Level 1 Lessons (grades 1 and 2)
- **Introduction**
- **Lesson 1** (use in December)
- **Lesson 2** (use in January)
- **Lesson 3** (use in February)

Level 2 Lessons (grades 3 and 4)
- **Introduction**
- **Lesson 1** (use in December)
- **Lesson 2** (use in January)
- **Lesson 3** (use in February)

Level 3 Lessons (grades 5 and 6)
- **Introduction**
- **Lesson 1** (use in December)
- **Lesson 2** (use in January)
- **Lesson 3** (use in February)

Each lesson provides curriculum connections and descriptions of student skills. There are lunchroom links, suggestions for home connections and ready-to-print activity sheets.

Teachers can tour the adult version of MyPyramid. www.mypyramid.gov.

Background

For February, the milk category of MyPyramid is highlighted.

The blue stripe represents milk and milk products such as

Pick a **better** snack™ campaign was developed by the Iowa Nutrition Network partners with funds from USDA's Food Stamp and Team Nutrition programs. Pick a **better** snack & Act lessons are provided by the Iowa Department of Public Health with funding from Food Stamp Nutrition Education and CDC's Nutrition and Physical Activity Division with additional support from Iowa State University Extension. To view additional campaign materials, go to www.idph.state.ia.us/pickabettersnack.

milk, yogurt, and cheese. Fourth and fifth grade students need the equivalent of 3 cups of milk every day. One and one-half ounces of cheese or 1 cup of yogurt is equivalent to 1 cup of fluid milk. Choose low-fat or fat-free when selecting milk and milk products. Foods that are made from milk, but have little to no calcium such as cream cheese and butter are NOT part of the milk group.

If students don't like or can't consume milk, encourage lactose-free products or other calcium sources such as fortified foods and beverages. An example is calcium-fortified orange juice.

Milk and milk products are an important source of calcium. Diets that are rich in low-fat and fat-free milk products help build and maintain bone mass. It is important for youth to drink milk, because this is when their bone mass is being built. Most fluid milk is fortified with vitamin D. Vitamin D is an important nutrient that aids in the absorption of calcium.

Distribute the "What's on the Label" handout to each student. Tell the students that food labels give them important information about the nutritional value of the food. Discuss the following information with the students:

Ask the students to look for the words "Serving Size." (*For milk, the serving size is 8 fluid ounces or 1 cup.)*

Next, have the students find first the number of calories in a single serving of the food. Each of the first four labels is for an 8 fluid ounce glass of milk; yet they have a very different number of calories per serving. Why? (*Because of the fat and sugar content. Look at the calorie content for 1% chocolate milk. It is higher than the calorie content for whole milk. The extra calories come from sugar and chocolate.)*

At the bottom of the food label, students will find some numbers followed by percent signs. This is where calcium is listed. Use the % Daily Value (DV) column when possible: 5% DV or less is low, 20% or more is high.

Web Site Resources

www.idph.state.ia.us/pickabettersnack
www.fruitsandveggiesmorematters.org
www.mypyramid.gov/kids/index.html

The majority of the activities and worksheets are part of the MyPyramid for Kids classroom lessons. They can be found at http://teamnutrition.usda.gov/resources/mypyramidclassroom.html

Do the Activity: **4th Grade**	*Note: The level 2 (4th grade) MyPyramid lesson focuses on fruits and vegetables. Because most 4th graders have received several lessons on fruits and vegetables, it is recommended they follow the level 3 MyPyramid lesson on calcium.* Working in groups, have the students create an ad campaign for milk or a milk product. Have the students research Information for their campaign at http://www.nationaldairycouncil.org, http://www.midwestdairy.com, and www.MyPyramid.gov. Students may want to draw a logo or write lyrics for a jingle or a television commercial script for their ad campaign. Have the students include information about why their dairy product is a nutritious choice.
5th Grade	Distribute the "What's the Score?" worksheet to each 5th grade student. Have the students complete the worksheet from the data on the "What's on the Label" worksheet. Discuss the answers as a class.
Talk It Over: **4th Grade**	Ask students to suggest ways to increase the amount of milk products and calcium-rich foods in their diet. *(Make a smoothie by blending low-fat yogurt and frozen strawberries. Top a baked potato with low-fat cheese. Dip fruit in flavored yogurt. Drink orange juice with added calcium. Try calcium-fortified soy milk or yogurt. Drink milk with meals.)*
5th Grade	Ask the students to list healthy choices in the milk group. *(low-fat or skim milk, cottage cheese made with low-fat milk, low-fat cheeses, low-fat yogurt)* Ask which foods in the milk group are higher in calories because of added sugar and fat. *(Whole milk, chocolate milk, cheese, ice cream)* Encourage students to eat a wide variety of low-fat or fat-free milk and milk products, as opposed to the products higher in fat and calories.

Apply: **4th Grade**	Review the school lunch menu. Identify foods rich in calcium. What foods could be added to a cold-lunch, packed at home to increase the amount of calcium?
5th Grade	Encourage students to set a goal for increasing the amount of low-fat milk and milk products in their diets. (*Change from whole milk to skim milk. Include milk or a milk product at each meal.*)

Extend the Activity: (The previous activities for grade 4 emphasize skill development in thinking and analysis, and writing. For grade 5, math, health, and science connections include thinking skills making comparisons and math computation.) Additional curriculum extenders are listed below.

 **Art, Music & PE**	Draw a picture and word collage to include a minimum of 4 words from the following: milk, yogurt, cheese, calcium, low-fat, breakfast, lunch, dinner, snack, and cow.
 **Language Arts & Reading**	Write a one-page story that includes the following words: milk, yogurt, cheese, calcium, low-fat, breakfast, lunch, dinner, snack, and cow. End the story with "Open. Drink (or Eat). How easy is that?"
 **Math**	Compare the nutrient content in low-fat chocolate milk with a soft drink. The milk will contain calcium, vitamin D, riboflavin, phosphorus, protein, potassium, vitamin A, vitamin B12, and niacin. Soft drinks have phosphorus.
 **Science & Health**	Take two cooked chicken bones with meat removed. Put one in a jar of water and one in a jar of vinegar. Set aside for two weeks. Calcium crystals will be on the side of the jar with the vinegar, since the calcium is leached from the bone. Compare the two bones. The one with less calcium will be weaker and will break easier. Bones need calcium to be strong. *(Source: Midwest Dairy Council)*
 **Social Studies**	Compare different jobs in the dairy food production industry. (From dairy farm to dairy processing company to transportation). Visit a dairy farm, or read one of the following books: Hooray for Dairy Farming, The Milk Makers, Collier Macmillan, 1985 or Milk: From Cow to Carton.

Name:

MyPyramid FOR KIDS

What's on the Label?

Milk fat-free

Nutrition Facts
Serving Size 8 fl oz (245g)
Servings Per Container 8

Amount Per Serving	
Calories 90	Calories from Fat 0
	%Daily Value*
Total Fat 0g	0 %
Saturated Fat 0g	0 %
Trans Fat 0g	0 %
Cholesterol < 5mg	0 %
Sodium 130mg	5 %
Total Carbohydrate 12g	4 %
Dietary Fiber 0g	0 %
Sugars 12g	
Protein 8g	
Vitamin A 10% • Vitamin C 4%	
Calcium 30% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

Milk 1%, chocolate

Nutrition Facts
Serving Size 8 fl oz (245g)
Servings Per Container 8

Amount Per Serving	
Calories 170	Calories from Fat 20
	%Daily Value*
Total Fat 2.5g	4 %
Saturated Fat 1.5g	8 %
Trans Fat 0g	0 %
Cholesterol 5mg	2 %
Sodium 190mg	8 %
Total Carbohydrate 29g	10 %
Dietary Fiber 1g	5 %
Sugars 27g	
Protein 8g	
Vitamin A 10% • Vitamin C 6%	
Calcium 30% • Iron 4%	

* Percent Daily Values are based on a 2,000 calorie diet.

Milk 2%

Nutrition Facts
Serving Size 8 fl oz (245g)
Servings Per Container 8

Amount Per Serving	
Calories 130	Calories from Fat 45
	%Daily Value*
Total Fat 5g	8 %
Saturated Fat 3g	15 %
Trans Fat 0g	0 %
Cholesterol 20mg	7 %
Sodium 125mg	5 %
Total Carbohydrate 13g	4 %
Dietary Fiber 0g	0 %
Sugars 12g	
Protein 8g	
Vitamin A 10% • Vitamin C 4%	
Calcium 30% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

Milk whole

Nutrition Facts
Serving Size 8 fl oz (245g)
Servings Per Container 8

Amount Per Serving	
Calories 150	Calories from Fat 70
	%Daily Value*
Total Fat 8g	12 %
Saturated Fat 5g	25 %
Trans Fat 0g	0 %
Cholesterol 35mg	11 %
Sodium 125mg	5 %
Total Carbohydrate 12g	4 %
Dietary Fiber 0g	0 %
Sugars 12g	
Protein 8g	
Vitamin A 6% • Vitamin C 4%	
Calcium 30% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

Vanilla ice cream

Nutrition Facts
Serving Size 1/2 cup (65g)
Servings Per Container 14

Amount Per Serving	
Calories 140	Calories from Fat 70
	%Daily Value*
Total Fat 7g	11 %
Saturated Fat 4.5g	23 %
Trans Fat 0g	0 %
Cholesterol 20mg	6 %
Sodium 40mg	2 %
Total Carbohydrate 15g	5 %
Dietary Fiber 0g	0 %
Sugars 15g	
Protein 3g	
Vitamin A 4% • Vitamin C 0%	
Calcium 10% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

American cheese

Nutrition Facts
Serving Size 1 slice (19g)
Servings Per Container 24

Amount Per Serving	
Calories 60	Calories from Fat 40
	%Daily Value*
Total Fat 4.5g	7 %
Saturated Fat 2.5g	13 %
Trans Fat 0g	0 %
Cholesterol 15mg	5 %
Sodium 250mg	10 %
Total Carbohydrate 1g	0 %
Dietary Fiber 0g	0 %
Sugars 1g	
Protein 3g	
Vitamin A 4% • Vitamin C 0%	
Calcium 20% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

Fruit-flavored yogurt

Nutrition Facts
Serving Size 6 ounces (170g)
Servings Per Container 1

Amount Per Serving	
Calories 170	Calories from Fat 15
	%Daily Value*
Total Fat 1.5g	2 %
Saturated Fat 1g	5 %
Trans Fat 0g	0 %
Cholesterol 10mg	3 %
Sodium 125mg	5 %
Total Carbohydrate 33g	11 %
Dietary Fiber 0g	0 %
Sugars 30g	
Protein 6g	
Vitamin A 0% • Vitamin C 0%	
Calcium 20% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

Cottage cheese

Nutrition Facts
Serving Size 1/2 cup (119g)
Servings Per Container 4

Amount Per Serving	
Calories 90	Calories from Fat 20
	%Daily Value*
Total Fat 2.5g	4 %
Saturated Fat 1.5g	8 %
Trans Fat 0g	0 %
Cholesterol 15mg	5 %
Sodium 410mg	17 %
Total Carbohydrate 6g	2 %
Dietary Fiber 0g	0 %
Sugars 5g	
Protein 11g	
Vitamin A 4% • Vitamin C 0%	
Calcium 8% • Iron 0%	

* Percent Daily Values are based on a 2,000 calorie diet.

Name: _____

MyPyramid FOR KIDS

What's the Score?

Here is a way to compare foods to see which foods are the best choices for you. Answer the questions below for these four foods, using *What's on the Label?*

	Fat-free milk	1% chocolate milk	2% milk	Whole milk
1. What is the serving size for this item?				
2. Is the serving size realistic? *(Is this how much you would normally eat/drink?)*				
3. How many total calories in one serving?				
4. How many total grams of fat in one serving?				
5. What percent of calcium in one serving?				

Based on this information, which type of milk offers the most calcium with the lowest fat?

_____

Now look at *all* the labels on the page. Answer these questions:

1. If Manuel drinks 8 fluid ounces of 1% chocolate milk and eats 6 ounces of fruit-flavored yogurt, how much calcium has he had? _____

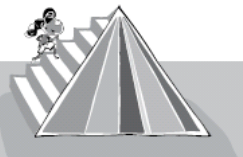
   How many grams of fat? _____

2. Which food item on the sheet has the least calcium with the highest amount of fat?

   _____

3. Which food item on the sheet has the most calcium with the lowest amount of fat?

   _____



Name:

MyPyramid FOR KIDS

What's the Score? Answer Key

Here is a way to compare foods to see which foods are the best choices for you. Answer the questions below for these four foods, using *What's on the Label?*

	Fat-free milk	1% chocolate milk	2% milk	Whole milk
1. What is the serving size for this item?	**1 cup (8 fl oz)**	**1 cup (8 fl oz)**	**1 cup (8 fl oz)**	**1 cup (8 fl oz)**
2. Is the serving size realistic? *(Is this how much you would normally eat/drink?)*				
3. How many calories in one serving?	**90**	**170**	**130**	**150**
4. How many total grams of fat in one serving?	**0**	**2.5**	**5**	**8**
5. What percentage of calcium in one serving?	**30% DV**	**30% DV**	**30% DV**	**30% DV**

Based on this information, which type of milk offers the most calcium with the lowest fat?

Answer: Fat-free

Now look at *all* the labels on the page. Answer these questions:

1. If Manuel drinks 8 fluid ounces of 1% chocolate milk and eats 6 ounces of fruit-flavored yogurt, how much calcium has he had? **Answer: 50% DV**

   How many grams of fat? **Answer: 4 grams**

2. Which food item on the sheet has the least calcium with the highest amount of fat?

   Answer: Vanilla ice cream

3. Which food item on the sheet has the most calcium with the lowest amount of fat?

   Answer: Fat-free milk

February - Lesson Plan Grades 4-5

PHYSICAL ACTIVITY

Objectives

Encourage youth to be physically active every day

Learn the size and location of the heart, that the heart is a muscle and that we need a heart to live.

Recognize that being physically active is fun, helps you feel good and is good for your heart.

Supplies Needed

February
Pick a **better** snack™ & **ACT** scorecard

Bicycle Pump (optional)

Background

Being physically active and maintaining a healthy weight are both needed for good health, but they benefit health in different ways. Physical activity makes muscles stronger, especially the heart. The normal heart is a strong, hard-working pump made of muscle tissue. It's about the size of a person's fist. The heart has four chambers. The upper two chambers are the right atrium and left atrium, and the lower two are the right ventricle and left ventricle. Blood is pumped through the chambers, aided by four heart valves. The valves open and close to let the blood flow in only one direction.

Dark bluish blood, low in oxygen, flows back to the heart after circulating through the body, it returns to the heart through veins. From there the blood goes to the lungs where it gets fresh oxygen. After the blood is refreshed with oxygen, it's bright red. Then it returns to the heart where the red oxygen-rich blood is pumped out to the body.

Physical activity helps keep the heart strong just like other muscles. Physical activity helps the heart pump blood more efficiently, so the stronger the heart is, the more blood it can pump each time it beats, so it has to pump fewer times each day. Physical activity also helps keep the arteries free of cholesterol. The clearer the arteries, the better the heart pumps the blood.

Regular aerobic physical activity increases your fitness level and capacity for exercise. It also plays a role in both primary and secondary prevention of cardiovascular disease. Physical inactivity is a major risk factor for heart disease and stroke and is linked to cardiovascular mortality.

By including physical activity every day, it is possible to improve health and well-being and have fun too! Physical activity is more than moving your body. It is recommended for children to accumulate 60 minutes of moderate physical activity most days of the week, preferably daily. No matter what activity is chosen, it can be done all at once, or spread over two or three times during the day.

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Web Site Resources

www.idph.state.ia.us/pickabettersnack
www.mypyramid.gov/kids/index.html
www.americanheart.org

Do the Activity:

Begin by reviewing with the students what they already know about the heart (i.e. where it is located, what size it is, its purpose – in the rib cage, behind the sternum/breastbone, the size of a fist, to pump blood throughout the body to deliver oxygen and nutrients to cells).

The heart can beat up to 200 times per minute with extreme activity. The brain sends signals to the heart to control the rate. The body also produces chemical hormones, such as adrenaline, which can change the heart rate. When we are excited, scared, or anxious our heart gets a signal to beat faster. During a fever, the heart beats faster to bring more blood to the surface of the body to release heat and cool the body. The heart rate increases during and after a meal to send more blood to the digestive system. A trained athlete's heart can pump more blood with each beat so his or her heart rate is slower. Likewise, an athlete's recovery time is shorter. There are two ways the heart can meet the body's need for oxygen during exercise. It can beat faster or it can beat harder, moving more blood per pump. But it can only beat harder if it has been strengthened through regular exercise.

In the January Pick a **better** snack & **ACT** lesson students learned how to take their pulse. Review this with students and have the students find their pulse. Have each student find their heart rate.

Extend the activity:

- Energizers Heart Smart
- Energizers Jump Start Your Heart

Talk It Over:

Ask the students:
Have you already done some of the activities on the scorecard this month? Did your heart rate increase? Could you feel your heart beating stronger?

When do you perform these activities? *(At recess, playing at home, gym class.)*
Has anyone taken their pulse since January? What did they discover? Why is it important to increase your heart rate?

Participating in plenty of physical activities usually isn't a problem for people your age. But sometimes kids do have concerns about sports or other kinds of physical activities. Some people have an illness or other disability. Have you ever run into problems like these? What could you do to be physically active? Think of several creative ideas. It is important for every child to be active for 60 minutes most days, preferably daily.

Apply:

If possible, take students outdoors or into a gymnasium where they can run approximately 100 meters. *(Note: Any students who cannot participate in the activity can act as recorders.)* Have students take a one-minute pulse, run the designated distance and immediately take their pulse again.

Did you make your heart work harder when you ran? *(Yes)*

How can you tell? (*Students should recognize that their heart rate, indicated by their pulse rate, went up and that their breathing became deeper and more rapid.)*

What happens after you rest for a few minutes? *(Heart rate and breathing rate return to their resting rates.)*

Discuss what is on the scorecard this month:

- Jump
- Yoga
- Serve (table tennis)
- Invent

Source: American Heart Association December 27, 2005
http://www.americanheart.org/presenter.jhtml?identifier=3003073