

Mathematics
Lessons
K-4

Investigate! Are You Label Able?

Standards References

Math GLEs:

Grade 3: 8, 13, 43

Grade 4: 13, 14, 36

HEALTH Benchmarks

1-E-2

2-E-1

2-E-2

4-E-4

Materials

1. Assortment of Nutrition Facts Labels
2. 4 calculators
3. Paper and pencils
4. Colored pencils or markers
5. 1 shallow box (9x12) labeled *Learning Tools*

Activity Overview

Participants will examine Nutrition Facts Labels and use information to make more informed food choices that contribute to a healthy diet.

Key Concepts

- Food labels contain “Nutrition Facts” such as serving size, servings per container, calories and nutrients like proteins, fats and carbohydrates.
- Many foods come packaged with more than one serving.
- Daily Values (DV) on Nutrition Labels are use to make smart choices.
- Fat cholesterol and sodium levels should be limited in a healthy diet. (5% or less is low.)
- We should make sure our bodies get enough nutrients such as fiber, vitamins, calcium and iron. (20% or more is high.)

Procedure

Preparation: Print the Key Concepts, Lab Instructions, and Sample Nutrition Facts Labels on heavy cardstock and place at the Explore Station. Copy one student activity sheet for each family. Set up all materials needed at the station. Note: Students in grades K-2 should complete # 1-5 only and use a calculator.

1. Review the sample label for Macaroni and Cheese on the display board.
2. Locate the *Serving Size* and *Servings per Container* in section 1.
3. Check the number of calories per serving in section 2.
4. Calculate the total number of calories in the entire box.
5. Calculate the number of calories that you would consume if you only ate $\frac{1}{2}$ of a serving.
6. DV provides families with a way to compare food products.
7. Look at section 3 of the sample label. Fat, cholesterol and sodium need to be limited. Is the % DV is more than 20? If the answer is yes, this food item is not a healthy choice.
8. Look at section 4. We need to make sure that we get enough fiber, calcium, iron and vitamins. Is the % Daily Value greater than 20? If the answer is yes, this food item is considered nutrient-rich.
9. Locate the Nutrition Facts Label from one item of the display of foods. Graph at the bottom of your student activity sheet.
10. Read and discuss your Key Concepts!
11. Do you think that the food item you chose limits fat, cholesterol and sodium? (If the % DV is 5 or less, the answer is *yes*.)
12. Does the food item you completed provide enough nutrients? (If the % DV is 20 or greater, the answer is *yes*.)
13. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss the importance of understanding a Nutrition Facts Label.

Investigate! Are You Label Able? LAB INSTRUCTIONS

Note: Students in grades K-2 should complete #1-5 only and use a calculator.

1. Review the sample Nutrition Facts Label for Macaroni and Cheese on the display board.
2. Locate the *Serving Size* and *Servings per Container* in section 1.
3. Check the number of calories per serving in section 2.
4. Calculate the total number of calories in the entire box. (You may use a calculator, paper and pencil or mental math.)
5. Record your answer in part 1 of the student activity sheet. Discuss your strategy with your partner.
6. Calculate the number of calories that you would consume if you only ate $\frac{1}{2}$ of a serving. Record your answer in part 2 of the student activity sheet. Be sure that you show your work and explain your strategy.
7. Look at section 3 of the sample label. Fat, cholesterol and sodium need to be limited. Is the % Daily Value is more than 20? If the answer is yes, this food item is not a healthy choice.
8. Look at section 4. We need to make sure that we get enough fiber, calcium, iron and vitamins. Is the % Daily Value greater than 20? If the answer is yes, this food item is considered nutrient rich.
9. Choose 1 food item and locate the Nutrition Facts Label. Using the information given, complete the graph at the bottom of your student activity sheet.
10. Do you think that the food item you chose limits fat, cholesterol and sodium? (If the % Daily Value is 5 or less, the answer is *yes*.)
11. Does the food item you completed provide enough nutrients? (If the % Daily Value is 20 or greater, the answer is *yes*.)

Read and discuss your Key Concepts!

Were you surprised to find the amount of information found on the Nutrition Facts Label? How will you use what you learned to improve your overall diet?

Write what you have learned and stamp your *Passport to Good Health!*

Investigate! Are You Label Able?

Student Activity Sheet

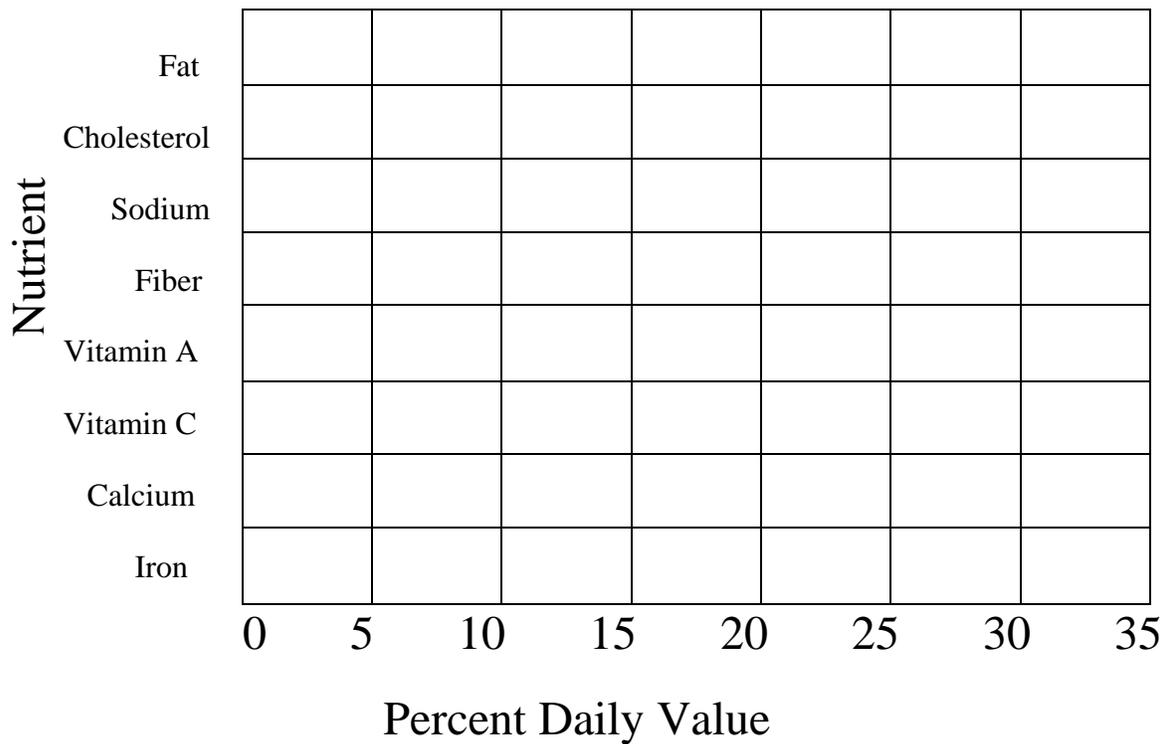
Sample label for
Macaroni & Cheese

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110

Part 1: The entire box of Macaroni and Cheese would contain _____ calories.

Part 2: If I only eat 1/2 of a serving, I would consume _____ calories.

Part 3: Graph the Nutrition Facts from one food item.



Investigate! Are You Label Able?

Sample label for
Macaroni & Cheese

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

1. Start here.

2. Check calories.

3. Limit fat, cholesterol, and sodium.

4. Get enough of dietary fiber, vitamins, and minerals.

5. Footnotes

6. Quick Guide to % DV

- 5% or less is low
- 20% or more is high

Investigate! Are You Label Able?

- Food labels contain “Nutrition Facts” such as serving size, servings per container, calories and nutrients like proteins, fats and carbohydrates.
- The first thing to consider is the serving size. Many foods come packaged with more than one serving. Therefore, if you intend to eat the “whole thing,” multiply the number of servings in the package by the calories to determine just how much you are consuming.
- Fat, cholesterol and sodium should be limited in a healthy diet. (5% or less is low.)
- We should make sure our bodies get enough nutrients such as fiber, vitamins and minerals. (20% or more is high.)
- The % Daily Values (% DV) are based on the Daily Value recommendations for key nutrients, but only for a 2000 calorie diet.
- You, like most people, may not know how many calories you consume in a day, but you can still use the %DV as a frame of reference.
- The % DV helps determine if a serving of food is high or low in a nutrient.
- The percentages are calculated for you and are all put on a scale for the day (0-100% DV).
- This allows you to tell high (more than 20%) from low (less than 5%) and know which nutrients contribute a lot, or a little, to your daily recommended allowance.

Investigate! Calorie Count

Standards References

Math GLEs:

Grade 3: 8, 17, 47

Grade 4: 14, 15, 44

HEALTH Benchmarks

1-E-2

2-E-1

2-E-2

3-E-1

4-E-4

Materials

1. Assortment of food items with nutrition facts labels such as:
 - Biscuits
 - Chocolate bar
 - Green beans
 - Nuts
 - Pepperoni pizza
2. 4 calculators
3. Paper and pencils
4. 4 jump ropes
4. 4 pedometers with calorie count mode
5. 4 timers or stopwatches
6. 1 shallow box (9x12) labeled *Learning Tools*

Activity Overview

Participants will use a pedometer to determine the length of time it takes to burn calories while engaged in physical activity.

Key Concepts

- A calorie is a measure of energy.
- Excess calories are stored in our bodies as fat and we gain weight.
- Weight gain can lead to obesity, which is linked to a number of health problems.
- Physical activity burns calories, leaving less to be stored as unwanted fat.

Procedure

Preparation: Print the Key Concepts and Lab Instructions on heavy cardstock and place at the Explore Station. Copy one student activity sheet for each family. Set up all materials needed at the station.

1. Choose a food item from the station.
2. Locate the *Serving Size* and *Servings Per Container*.
3. Check the number of calories per serving.
4. Choose from the following activities: jog in place, jumping jacks, jump rope, or sit.
5. Using the pedometers and timers provided, begin and continue the activity for 2 minutes. Be sure your pedometer is set on the calorie count mode.
6. Record your information on the Student Activity Sheet.
7. Did you burn the calories in 1 serving of your food item? If not, calculate the length of time it would take to burn the total calories based on the count for 2 minutes. (Hint: You may want to make an input/output table.)
8. Record your answer on the Student Activity Sheet. Be sure to show your work and discuss your strategy with your partner.
9. Read and discuss your Key Concepts!
10. Were you surprised at how difficult it is to burn the calories in just one serving of food?
11. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss the importance monitoring caloric intake and physical activity.

Investigate! Calorie Count LAB INSTRUCTIONS

1. Choose a food item from the station.
2. Locate the *Serving Size* and *Servings Per Container*.
3. Check the number of calories per serving.
4. Choose from the following activities: jog in place, jumping jacks, jump rope, or sit.
5. Using the pedometers and timers provided, begin your activity and continue to exercise for 2 minutes. Be sure your pedometer is set on the calorie count mode.
6. Record your information on the Student Activity Sheet.
7. Did you burn the calories in 1 serving of your food item? If not, calculate the length of time it would take to burn the total calories based on the count for 2 minutes. (Hint: You may want to make an input/output table.)
8. Record your answer on the Student Activity Sheet. Be sure to show your work and discuss your strategy with your partner.

Read and discuss your Key Concepts!

Were you surprised at how difficult it was to burn the calories in just one serving of food? If we choose to consume extra calories, how much physical activity needs to be done to burn them?

Be sure to write what you have learned and stamp your
Passport to Good Health!

 Investigate! Calorie Count
Student Activity Sheet

Food Item: _____
Calories per serving: _____

Activity: _____
Calorie Value for 2 min.: _____

Calculate the length of time it would take to burn the total number of calories in 1 serving of your food item. Show your work and explain your strategy using words, numbers or pictures.

Investigate! Calorie Count

- A calorie is a measure of energy, the capacity to do work.
- Our bodies need energy for growth, maintenance and physical activity.
- The number of calories you need depends on your height and weight as well as your age, gender and physical activity.
- Comparing calories used for various levels of physical activity is important in maintaining one's weight.
- Younger adults require more calories per pound than older adults.
- Active people require more calories than inactive people.
- Excess calories are stored in our bodies as fat and we gain weight.
- Weight gain can lead to obesity, which is linked to a number of health problems.
- Physical activity burns calories, leaving less to be stored as unwanted fat.
- Our bodies burn calories even when we are sleeping and sitting – about 1 per minute.
- Walking 1 mile at a fast pace burns about 100 calories.
- Jogging burns 3 times more calories than walking.
- If we choose to consume more calories than our bodies need, we need to increase our physical activity.

Investigate! The Colors of Health

Standards References

Math GLEs

Pre-K: 1, 2, 7

K: 1, 2, 11, 12, 13

Grade 1: 1, 15, 18, 19, 32

Grade 2: 32

Grade 3: 5, 8, 15, 16, 39

Grade 4: 39, 40

HEALTH Benchmarks

1-E-2

3-E-1

4-E-4

5-E-3

6-E-3

Materials

1. *The Very Hungry Caterpillar* by Eric Carle
2. 1 box labeled *Learning Tools*
3. Assortment of fruits and vegetables from the 5 color groups
4. 4 calculators
5. Placemat or work mat
6. 100 counters
7. 4 100's charts laminated
8. Paper and pencils

Activity Overview

Participants will read *The Very Hungry Caterpillar* by Eric Carle and develop a list of various combinations of fruits and vegetables to meet the daily requirements based on the *USDA MyPyramid*.

Key Concepts

- The USDA recommends eating five to nine servings per day of fruits and vegetables. Persons needing fewer calories would need to eat five servings and persons needing more calories would need to eat nine servings.
- Eating fruits and vegetables from each color of the color spectrum each day is a good guide.
- Strategies for combining servings include making an organized list and completing a tree diagram.

Procedure

Preparation: Print the Key Concepts and The Colors of Health on heavy cardstock and place at the Explore Station. Set up all materials needed at the station. Copies of the student activity sheet should be available.

1. Read *The Very Hungry Caterpillar* by Eric Carle. Discuss the foods that the caterpillar ate in the entire week.
2. Look at the fruits and vegetables in the bowls in front of you. Select two fruits and three vegetables that you would like to eat on any given day and make sure that each item is a different color!
3. Place them on the orange work mat. (Your mat will look like a rainbow!)
4. Count the total number of items. Do you have 5 fruits and vegetables altogether?
5. Calculate the number of servings of fruits and vegetables that you would consume in one week if you eat five servings each day.
6. Place the fruits and vegetables back in the bowls.
7. Look at the lists of fruits and vegetables grouped by color.
8. List combinations of two servings of fruit and 3 servings of vegetables on the student activity sheet for each day of the week. Each day must be a different combination and you must have each color represented.
9. Congratulations! You have planned your *5 A Day the Color Way* for an entire week.
10. Revisit the Eric Carle book, *The Very Hungry Caterpillar*. Did the caterpillar get his 5 a day?
11. Read the challenge question on your activity sheet and find the solution.
12. Read and discuss your Key Concepts! What did you learn about improving your health through proper nutrition?
13. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under "Key Concepts" and discuss how important proper nutrition is to the body. Refer families to a fruit and vegetable tasting display if available.



Investigate! The Colors of Health

LAB INSTRUCTIONS

1. Read *The Very Hungry Caterpillar* by Eric Carle. Discuss the foods that the caterpillar ate in the entire week. Which foods do you think were healthy choices? Which were unhealthy choices and why?
2. Look at the fruits and vegetables in the bowls in front of you. Select 2 fruits and 3 vegetables that you would like to eat on any given day, and make sure that each item is a different color!
3. Place them on the orange work mat. (Your mat will look like a rainbow!)
4. Count the total number of items. Do you have 5 fruits and vegetables altogether?
5. Calculate the number of servings of fruits and vegetables that you would consume in one week if you eat 5 servings each day. Use mental math or any tools from the *Learning Tools* box and share your strategy with your partner.
6. Place the fruits and vegetables back in the bowls.
7. Look at the lists of fruits and vegetables grouped by color.
8. List combinations of 2 servings of fruit and 3 servings of vegetables on the student activity sheet for each day of the week. Each day must be a different combination and you must have each color represented.
9. Congratulations! You have planned your *5 A Day the Color Way* for an entire week.
10. Revisit the Eric Carle book, *The Very Hungry Caterpillar*. Did the caterpillar get his 5 a day?
11. Read the challenge question on your activity sheet and find the solution. (Hint: You may want to make an organized list or a tree diagram.)

Read and discuss your Key Concepts

What did you learn about improving your health through proper nutrition?

Be sure to write what you have learned and stamp your

Passport to Good Health!

 **Investigate! The Colors of Health**
Student Activity Sheet

MONDAY					
TUESDAY					
WEDNESDAY					
THURSDAY					
FRIDAY					
SATURDAY					
SUNDAY					

Challenge your brain!

List all the different combinations that you can make using the following fruits and vegetables. You must meet the 5 a day requirements of 2 fruits and 3 vegetables! Remember to show your work and explain your thinking. You may use the back of this sheet. (Hint: You may need to make an organized list or a tree diagram.)

Red apples and Plums
Strawberries and Blueberries
Broccoli, White Corn and Carrots
Green Beans, Turnips and Sweet Potatoes
Asparagus, Potatoes and Yellow Squash



Investigate! The Colors of Health

RED

Red fruits and vegetables contain phytochemicals. Specific phytochemicals in the red group that are being studied for their health-promoting properties include **lycopene** and **anthocyanins**. Include a variety of RED fruits and vegetables in your low-fat diet to help maintain:

- A healthy heart
- Memory function
- A lower risk of some cancers
- Urinary tract health

Include RED fruits and vegetables in your diet such as:

Red apples

Blood oranges

Cherries

Cranberries

Red grapes

Pink/Red grapefruit

Red pears

Pomegranates

Raspberries

Strawberries

Watermelon

Beets

Red peppers

Radishes

Radicchio

Red onions

Red potatoes

Rhubarb

Tomatoes



Investigate! The Colors of Health

YELLOW/ORANGE

Yellow and orange fruits and vegetables contain varying amounts of antioxidants such as **vitamin C** as well as **carotenoids** and **bioflavonoids**, two classes of phytochemicals that scientists are studying for their health-promoting potential. Including YELLOW/ORANGE in your low-fat diet helps maintain:

- A healthy heart
- Vision health
- A healthy immune system
- A lower risk of some cancers

Choose Yellow/Orange fruits and vegetables like:

Yellow apples
Persimmons
Pineapples
Tangerines
Yellow watermelon
Yellow beets
Butternut squash
Carrots
Yellow peppers
Yellow potatoes
Pumpkin
Rutabagas
Yellow summer squash
Yellow winter squash
Sweet potatoes

Yellow pears
Apricots
Cantaloupe
Yellow figs
Grapefruit
Golden kiwifruit
Lemon
Mangoes
Nectarines
Oranges
Papayas
Peaches
Yellow tomatoes
Sweet corn

 Investigate! The Colors of Health

WHITE

White, tan, and brown fruits and vegetables contain varying amounts of phytochemicals of interest to scientists. These include **allicin**, found in the garlic and onion family. The mineral **selenium**, found in mushrooms, is also the subject of research. Including WHITE in your low-fat diet helps maintain:

- Heart health
- Cholesterol levels that are already healthy
- A lower risk of some cancers

Get all the health benefits of white by including foods such as:

Bananas

Brown pears

Dates

White nectarines

White peaches

Cauliflower

Garlic

Ginger

Jerusalem artichoke

Mushrooms

Onions

Parsnips

Potatoes (white fleshed)

Shallots

Turnips

White Corn



Investigate! The Colors of Health

GREEN

Green vegetables contain varying amounts of phytochemicals such as **lutein** and **indoles**, which interest researchers because of their potential antioxidant, health-promoting benefits. Include GREEN in your low-fat diet to maintain:

- A lower risk of some cancers
- Vision health
- Strong bones and teeth

Go green every day with fruits and vegetables like these:

Avocados
Chayote squash
Cucumbers
Endive
Leafy greens
Leeks
Lettuce
Green onion
Okra
Peas
Green pepper
Snow Peas
Sugar snap peas
Spinach
Chinese cabbage
Green beans

Watercress
Zucchini
Green apples
Green grapes
Honeydew
Kiwifruit
Limes
Green pears
Artichokes
Arugula
Asparagus
Broccoli
Broccoli
Brussels sprouts
Green cabbage
Celery



Investigate! The Colors of Health

BLUE/PURPLE

Blue/purple fruits and vegetables contain varying amounts of health-promoting phytochemicals such as **anthocyanins** and **phenolics**, currently being studied for their antioxidant and anti-aging benefits. Include BLUE/PURPLE in your lowfat diet to help maintain:

- A lower risk of some cancers
- Urinary tract health
- Memory function
- Healthy aging

Get blue/purple every day with foods such as:

Blackberries
Purple asparagus
Purple cabbage
Purple carrots
Eggplant
Purple Belgian endive
Purple peppers
Blueberries
Black currants
Dried plums
Elderberries
Purple figs
Purple grapes
Plums
Raisins

Investigate! The Colors of Health

- The USDA recommends 5-9 servings per day of fruits and vegetables.
- The recommendation for children 2-6 years and women is 5 servings – 2 fruits and 3 vegetables. (Based on 1600 calories)
- The recommendation for older children, teen girls, active women and most men is 7 servings – 3 fruits and 4 vegetables. (Based on 2200 calories)
- Teen boys and active men who typically need about 2800 calories should have 9 servings daily.
- Experts agree that it is essential to sample the complete color spectrum every day to receive the full benefits from the fruits and vegetables that we choose to eat.
- Many different combinations of fruits and vegetables can be formed to provide variety while meeting the guidelines set by the USDA.
- Making an organized list and completing a tree diagram are two ways to find different combinations.
- Many of the phytochemicals and other compounds that make fruits and vegetables good for us also give them their color.
- Blue/purple fruits and vegetables help maintain urinary tract health, memory function and healthy aging.
- Include green in your low-fat diet to improve vision health and create strong bones and teeth.
- White, tan and brown fruits and vegetables help keep us heart healthy and maintain cholesterol levels that are already healthy.
- Yellow and orange fruits and vegetables help maintain a healthy heart, a healthy immune system and vision health.
- Red fruits and vegetables help to maintain a healthy heart, memory function and urinary tract health.
- Fruits and vegetables from the entire color spectrum are believed to lower our risk of certain types of cancer.

Investigate! Feeling the Beat

Standards References

Math GLEs

Grade 2: 1, 2

Grade 3: 1, 2, 8, 11, 13

Grade 4: 1, 2, 13, 14

HEALTH Benchmarks

1-E-2

3-E-1

3-E-2

5-E-6

Materials

1. 4 stopwatches
2. 1 box labeled *Learning Tools*
3. Base Ten Blocks (starter set)
4. 4 calculators
5. 4 300's charts laminated
6. 4 100's charts laminated
7. Paper and pencils
8. Student Activity Sheet
9. Heart Rate Chart
10. Stethoscope for kindergarten and first grade

Activity Overview

Participants calculate heart rates at rest and target heart rates following physical activity.

Key Concepts

- Heart rate or pulse is the number of times your heart beats per minute.
- Heart rate increases with exercise.
- A normal resting heart rate for children ages 1-10 is 70-120 beats per minute. Children over 10, adults, and well-trained athletes should have lower resting heart rates
- Heart rate and maximum Heart Rate (MHR) can be predicted through mathematical operations.
- Your target heart rate when exercising is 60 to 80% of your MHR.

Procedure

Preparation: Print the Key Concepts and Heart Rate Chart on heavy cardstock and place at the Explore Station. Print a student activity sheet for each family.

Note: Kindergarten and first grade students should complete only steps 1, 2, 3, 6, and 7 and should not complete the activity sheet. Students can use a stethoscope to compare their heart rates while resting to their rates after exercise.

1. You are going to find your resting heart rate or how many times your heart beats in one minute.
2. Locate your carotid artery on your neck just below your jawbone. Use your index finger. This is your pulse.
3. Count the number of times you “feel the beat” while your partner times you for six seconds using the stopwatch provided. (Kindergarten and first grade students should be timed for 60 seconds.)
4. Calculate how many times your heart would beat in 60 seconds or 1 minute.
5. You found your resting heart rate! Now it's your partner's turn. Repeat steps 2-4.
6. Calculate your heart rate following one minute of physical activity. Time your partner for one minute doing jumping jacks or running in place.
7. Repeat steps 3 and 4. How did exercise affect your heart rate? Record your heart rate after exercise on your activity sheet Part B and discuss your results with your partner. Don't forget to give your partner a turn!
8. Predict your Maximum Heart Rate (MHR) by subtracting your age from 220 using the Base Ten Blocks or any tools from the *Learning Tools* box. Record your MHR on your activity sheet Part C.
9. Your target heart rate is the rate that you should maintain when exercising to receive maximum health benefits. The target zone is between 60% and 80% of your MHR.
10. Look at the Heart Rate Chart for your age. Was your estimation reasonable?
11. Compare your target heart rate with your partner's.
12. Read and discuss your Key Concepts!
13. Write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Learnings” and discuss how important exercise is to the body.

Investigate! Feeling the Beat

LAB INSTRUCTIONS

Note: Kindergarten and first grade students should complete only steps 1, 2, 3, 6, and 7 and should not complete the activity sheet. Students can use a stethoscope to compare their heart rates while resting to their rates after exercise.

1. You are going to find your resting heart rate or how many times your heart beats in one minute.
2. Locate your carotid artery on your neck just below your jawbone. Use your index finger. This is your pulse.
3. Count the number of times you “feel the beat” while your partner times you for 6 seconds using the stopwatch provided. (Kindergarten and first grade students should be timed for 60 seconds.)
4. Calculate how many times your heart would beat in 60 seconds or 1 minute. You may use any of the items found in the *Learning Tools* box or mental math. Discuss your strategy with your partner. Do you see a pattern?
5. Congratulations! You found your resting heart rate! Record your findings on the activity sheet entitled *Feel the Beat*. Now it’s your partner’s turn. Repeat steps 2-4.
6. Now you are going to calculate your heart rate following 1 minute of physical activity. Time your partner for 1 minute doing jumping jacks.
7. Repeat steps 3 and 4. How did exercise affect your heart rate? Record your heart rate after exercise on your activity sheet and discuss your results with your partner. Don’t forget to give your partner a turn!
8. Now you are going to predict your Maximum Heart Rate (MHR) by subtracting your age from 220 using the Base Ten Blocks or any tools from the *Learning Tools* box. Record your MHR on your activity sheet.
9. Your Target Heart Rate is the rate you should maintain when exercising to receive maximum health benefits. The target zone is between 60% and 80% of your MHR. Can you give an estimation of your target? Would it be more or less than one half of your MHR? Explain your thinking to your partner.
10. Look at the Target Heart rate chart for your age. Was your estimation reasonable?
11. Compare your target heart rate with your partner’s. What do you notice about one’s heart rate as we age? Write your findings on your activity sheet.

Read and discuss your Key Concepts!

What did you learn about keeping your body healthy through physical activity?

Be sure to write what you have learned and stamp your

Passport to Good Health!



Investigate! Feeling the Beat

Student Activity Sheet

Part A:

I counted _____ beats in 6 seconds; therefore, my heart would beat _____ times in 60 seconds.

My resting heart rate is _____.

This is how I solved the problem:

Part B:

I counted _____ beats in 6 seconds; therefore, my heart would beat _____ beats in 60 seconds.

My heart rate after exercising is _____.

This is how I solved the problem:

Part C:

Maximum Heart Rate (MHR) _____

Challenge your brain!

If your resting heart rate is 80, how many times would your heart beat in:

- a) 5 minutes?
- b) 10 minutes?
- d) 1 hour?

Show your work and explain your thinking!

 Investigate! Feeling the Beat
Heart Rate Chart

Age	5 yrs.	6 yrs.	7 yrs.	8 yrs.	9 yrs.	10 yrs.
Maximum heart rate	215 beats	214 beats	213 beats	212 beats	211 beats	210 beats
60% target rate	129 beats	128 beats	128 beats	127 beats	127 beats	126 beats
70% target rate	151 beats	150 beats	149 beats	148 beats	148 beats	147 beats
80% target rate	172 beats	171 beats	170 beats	170 beats	169 beats	168 beats

Age	25 yrs.	30 yrs.	35 yrs.	40 yrs.	45 yrs.	50 yrs.
Maximum heart rate	195 beats	190 beats	185 beats	180 beats	175 beats	170 beats
60% target rate	117 beats	114 beats	111 beats	108 beats	105 beats	102 beats
70% target rate	137 beats	133 beats	130 beats	126 beats	123 beats	119 beats
80% target rate	156 beats	152 beats	156 beats	144 beats	140 beats	136 beats

Investigate! Feeling the Beat

- Heart rate or pulse is the number of times your heart beats per minute.
- Heart rate increases with exercise.
- A normal resting heart rate for children ages 1-10 is 70-120 beats per minute. Children over 10 and adults should have a resting heart rate between 60 and 100 beats per minute. A well-trained athlete could have a resting heart rate as low as 40 beats per minute.
- Maximum Heart Rate (MHR) can be predicted by subtracting your age from 220. *Note: There is a wide variation in maximum heart rate among individuals. MHR can vary 10-20 beats per minute.
- Heart rate can be calculated by counting the number of times your heart beats in 6 seconds and multiplying that number by 10. This will give the number of beats in 60 seconds or 1 minute.
- It is recommended that when exercising, you work between 60% and 80% of your MHR. This is known as your target heart rate.
- If your heart rate is above 80% of your target, you are working too hard.
- Recommendations state that children engage in some type of physical activity for a minimum of 60 minutes per day. Adults should engage in at least 30 minutes of moderate-intensity physical activity most days of the week.
- The lower your resting heart rate, the slower your heart is beating, which means that your heart does not have to work so hard and it will probably last longer!
- Regular exercise has many health benefits. These include weight control, decreased blood pressure, stronger muscles, stress relief and feeling good about oneself.

Investigate! Go Fish!

Standards References

Math GLEs:

Pre-K: 1, 2

K: 1, 2, 12

Grade 1: 33

HEALTH Benchmarks

1-E-2

2-E-2

3-E-1

3-E-2

4-E-4

Materials

1. One deck of Food Cards per Group--laminated and cut.

Activity Overview

Participants will explore the *5 a Day The Color Way* plan by playing the popular card game “Go Fish.”

Key Concepts

- According to the USDA, eating a low-fat diet that includes five to nine daily servings of fruits and vegetables is a key to developing a healthy lifestyle.
- Grouping fruits and vegetables by color serves as a reminder to eat a variety each day that provides necessary nutrients needed to stay healthy.

Procedure

Preparation: Print the Key Concepts, Lab Instructions, and Food Cards on heavy cardstock and place at the Explore Station. Set up all materials needed at the station.

1. You are going to play the popular card game “Go Fish” with pictures of fruits and vegetables on the face of the cards.
2. Shuffle the cards. Deal each player 5 cards. Place the remaining cards in the deck face down.
3. The object of the game is to make as many pairs of fruits and books of three vegetables as you can. (Each card must be a different color fruit or vegetable!)
4. For example, let’s say you are dealt the following hand: okra, broccoli, carrots, blueberries and cherries. You may want to ask your partner for a white vegetable such as potatoes. (Okra and broccoli cannot be used in the same book since they are the same color. You need another color vegetable such as white to go with one of the green vegetables and the carrots. You already have a pair of fruits-1 blue and 1 red.)
5. If your partner has a white vegetable, he or she must give it to you and you put down your pairs and or books. If your partner does not have the card that you ask for, he or she says “Go Fish” and you draw one card from the deck.
6. If the card that you need is drawn, put down your book and take another turn.
7. If the card you requested is not drawn, it is your partner’s turn.
8. The game is over when as many cards as possible are in pairs or books.
9. Read and discuss your Key Concepts! Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss what they learned about the 5 A Day Plan.



Investigate! Go Fish!

LAB INSTRUCTIONS

1. You are going to play the popular card game “Go Fish” with pictures of fruits and vegetables on the face of the cards.
2. Shuffle the cards. Deal each player 5 cards. Place the remaining cards in the deck face down.
3. The object of the game is to make as many pairs of fruits and books of three vegetables as you can. (Each card must be a different color fruit or vegetable!)
4. For example, let’s say you are dealt the following hand: okra, broccoli, carrots, blueberries and cherries. You may want to ask your partner for a white vegetable such as potatoes. (You already have a pair of fruits-1 blue and 1 red.)
5. If your partner has a white vegetable, he or she must give it to you and you put down your pairs and or books. If your partner does not have the card that you ask for, he or she says “Go Fish” and you draw one card from the deck.
6. If the card that you need is drawn, put down your book and take another turn.
7. If the card you requested is not drawn, it is your partner’s turn.
8. The game is over when as many cards as possible are in pairs or books.

Read and discuss your Key Concepts!

What did you learn about the importance of fruits and vegetables in our diets? Do you think you eat enough fruits and vegetables?

Be sure to write what you have learned and stamp your

Passport to Good Health!

Investigate! Go Fish!



Artichoke



Asparagus



Avocado



Banana



Beets



Bell Pepper



Blueberries



Broccoli



Brussels
Sprouts

Investigate! Go Fish!



Cabbage



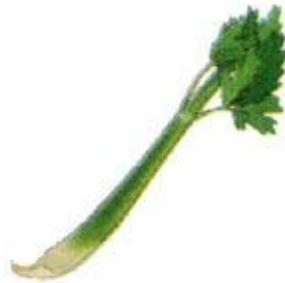
Cantaloupe



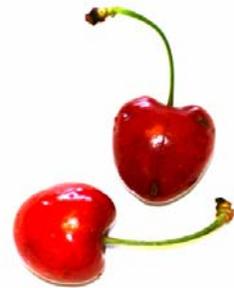
Carrots



Cauliflower



Celery



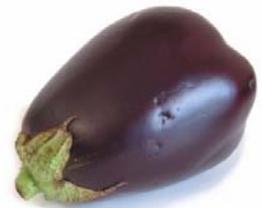
Cherries



Corn

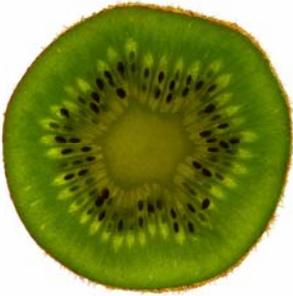


Cranberries



Eggplant

Investigate! Go Fish!



Kiwi



Lemon



Lettuce



Lime



Mango



Mushroom



Nectarine



Okra



Orange

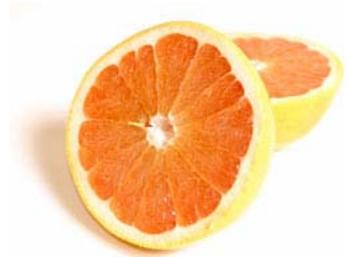
Investigate! Go Fish!



Garlic



Ginger



Grapefruit



Granny Smith
Apple



Green Grapes



Green Onions



Papaya



Peach



Pear

Investigate! Go Fish!



Peas



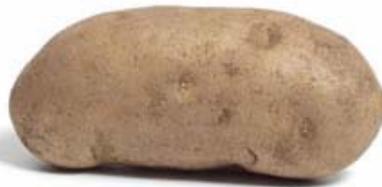
Pineapple



Plum



Pomegranate



Potato



Pumpkin



Purple Cabbage



Purple Grapes



Radish

Investigate! Go Fish!



Raspberries



Red Apple



Yellow Pepper



Red Pear



Strawberries



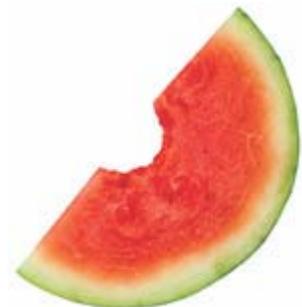
White Onions



Tomato



Turnip



Watermelon

 Investigate! Go Fish!



Yellow Squash



Zucchini



Green Beans

Investigate! Go Fish!

- According to the USDA, eating a low-fat diet that includes five to nine daily servings of fruits and vegetables is the key to developing a healthy lifestyle.
- Grouping fruits and vegetables by color serves as a reminder to eat a variety each day that provides necessary nutrients needed to stay healthy.
- Fewer than 15 percent of elementary students eat the recommended 5 or more servings of fruits and vegetables every day.
- The average fruit and vegetables intake among 6-11 year olds is only 3.5 servings a day.
- One quarter of all vegetables eaten by elementary students are French fries.
- Colorful fruits and vegetables provide a wide range of the vitamins, minerals, fiber and phytochemicals our bodies use to stay healthy and energetic.
- They also help us maintain a healthy weight, protect us against the effects of aging and reduce the risk of cancer, heart disease, high blood pressure and other chronic diseases.
- To learn more about the *5 A Day The Color Way* plan, visit www.5aday.com.

Investigate! Going to the Movies: The Calorie Cost

Standards References

Math GLEs

Grade 3: 6, 7, 8, 13, 15, 16, 25, 28, 39, 43

Grade 4: 13, 14, 19, 21, 22, 24

HEALTH Benchmarks

1-E-2

1-E-3

2-E-2

3-E-1

4-E-4

5-E-6

6-E-3

Materials

1. Small, Medium and Large popcorn containers
2. Small, Medium and Large drink cups
3. Assortment of movie packs of candy
4. 4 calculators
5. 4 one-cup measuring cups
6. Large bowl
7. 30 cups popped popcorn
8. Paper and Pencils

Activity Overview

Participants will estimate and measure popcorn and examine nutrition facts labels on “Movie Packs” of popular candy and soda to determine the “calorie cost” of one trip to the theatre.

Key Concepts

- Containers of popcorn purchased at a movie theatre can contain as many calories as needed for the entire day.
- We tend to purchase the large sizes of refreshments when watching a movie because they are the “best buy;” however, the number of extra calories is more than what is suggested in MyPyramid.
- The discretionary, or extra, calorie allowance in the USDA MyPyramid is the remaining amount of calories after nutrient-dense forms of foods in each food group are selected.
- Estimating quantities is an essential skill when food items are not packaged and labeled.
- Daily caloric intake should be compared with recommended intake and adjusted accordingly.

Procedure

Preparation: Print the Key Concepts on heavy cardstock and place at the Explore Station. Set up all materials needed at the station. Clearly label all containers.

1. Estimate the number of 1-cup servings in the largest container of popcorn.
2. Empty the popcorn into the bowl and measure the exact number of cups.
3. Compare your estimation to the exact measure.
4. Calculate the number of calories that you would consume if you ate all of the popcorn based on the information provided in the lab instructions.
5. Compare the number of calories in the popcorn to a 2000-calorie a day plan.
6. Calculate your calorie consumption if you shared the popcorn with a friend. What if you divided the popcorn with 3 friends? Would this be a combining situation or a separating situation?
7. Locate the Nutrition Facts Label on the back of on box of candy that you might buy at the movies.
8. Record the calories per serving. How many servings are in the box? How many calories would you consume if you ate the whole box?
9. Calculate your calorie consumption if you shared the candy with a friend. What if you shared the candy with 3 friends? Record your answer.
10. What size soda do you usually order?
11. Calculate the number of calories in your soda based on the information provided in the lab instructions.
12. Add up the total “calorie cost” for your trip to the movies.
13. Read and discuss your Key Concepts! What did you learn about extra calories when compared to a trip to the movies?
14. Write down what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss the ways to decrease the “calorie cost” of going to the movies.

Investigate! Going to the Movies: The Calorie Cost

LAB INSTRUCTIONS

1. Look at the largest container of popcorn and estimate the number of 1-cup servings it contains.
2. Empty the popcorn into the bowl and measure the exact number of cups.
3. Compare your estimation to the exact measure. Did you estimate more or less? How much more? How much less?
4. Calculate the number of calories that you would consume if you ate all of the popcorn based on the following information: 1 cup contains approximately 68 calories with added butter and approximately 40 calories without added butter. You may use the calculator or pencil and paper. Use your estimation skills (rounding) so that you will know if your answer is reasonable or not!
5. Record and organize your answer on a blank sheet of paper.
6. Compare the number of calories in the popcorn to a 2000-calorie a day plan. Discuss your findings with your partner.
7. Calculate your calorie consumption if you shared the popcorn with a friend. What if you divided the popcorn with 3 friends? Would this be a combining situation or a separating situation? Record your findings.
8. Choose 1 box of candy that you might buy at the movie.
9. Locate the Nutrition Facts Label on the back of the box.
10. Record the calories per serving. Now look at the number of servings per box. How many calories would you consume if you ate the whole box? Discuss your findings with your partner. Record your answer.
11. Calculate your calorie intake if you shared the candy with a friend. What if you shared the candy with 3 friends? Record your answer.
12. You are probably thirsty by now! What about a soda?
13. Decide which size you would order. (The largest is usually the best buy.)
14. Calculate the number of calories in your soda based on the following information: 24 oz. contains 320 calories, 48 oz. contains 640 calories and the 64 oz. a whopping 850 calories. Record your answer.
15. Now find the total “calorie cost” for your trip to the movies. You may use the figures based on one individual consuming all of the food items or the number of calories consumed if you shared. Record your findings and discuss the “cost” with your partner.

Read and discuss your Key Concepts!

What did you learn about discretionary calories? Do you need to make healthier choices at when going to the movies? Be sure to write what you have learned and stamp your *Passport to Good Health!*



Investigate! Going to the Movies: The Calorie Cost

- While popcorn is considered a nutritious snack, consuming large quantities such as those sold at a movie theatre can cause one's calorie count to go through the roof!
- According to *USA Today*, a large "tub" of buttered popcorn while proving to be the most economical contains 1640 calories and is approximately 15 servings.
- The oversized candy boxes contain between 2 and 6 servings each and are loaded with "empty calories."
- We tend to purchase the large soft drink because it is the "best buy," but a 48 oz. soft drink has about 640 calories and the 64 oz. about 850 calories.
- The discretionary, or extra, calorie allowance in the USDA MyPyramid refers to the remaining daily amount of calories in each calorie level after nutrient-dense forms of foods in each food group are selected.
- This extra calorie allowance is based on an individual's caloric needs based on age, gender, and activity level and ranges from 170 to 410 calories.
- Children 7-9 years of age with a calorie level of 1400 have a discretionary calorie allowance of 170. This is less than the number of calories in a 24 oz. soda!
- Children 7-9 years old with a calorie level of 1600 have a discretionary calorie allowance of 132.
- A 35-year-old female who needs to consume 2000 calories per day has a discretionary calorie allowance of 267.
- A 35-year-old male whose calorie level is 2600 is allowed 410 discretionary, or extra, calories.
- A trip to the movies can be very "costly" in terms of calories!

Investigate! It's All in a Day's Work

Standards References

Math GLEs:

Grade 2: 8, 12, 32

Grade 3: 8, 11, 15, 16, 43, 47

Grade 4: 14

HEALTH Benchmarks

1-E-2

1-E-3

2-E-2

3-E-1

3-E-2

4-E-4

Materials

1. 4 calculators
2. Pencils
3. Student activity sheet

Activity Overview

Participants will explore calorie values for everyday activities.

Key Concepts

- A calorie as the amount of energy required to raise the temperature of 1 gram of water by 1 degree Celsius. In nutrition, we work in kilocalories, but we refer to them as Calories with a capital C.
- The calories that we need for maintenance and growth come from the foods that we eat.
- We use calories when engaged in various activities, including sitting and resting.
- The more physically active we are, the more calories we need.

Procedure

Preparation: Print the Key Concepts, Lab Instructions and Activity Chart on heavy cardstock and place at the Explore Station. Copy one student activity sheet for each family. Set up all materials needed at the station.

1. Review the Activity Chart on the display board.
2. Pretend that it is Saturday and that you are playing, resting and doing your chores. Include everyday activities such as dressing and walking on your list.
3. Make a list of activities from the chart that you might be doing and record the calorie value for every 10 minutes on the Student Activity sheet provided.
4. Use the student activity sheet to record the calories needed every 10 minutes of the activities you plan to do. Calculate the calories needed for the length of time that you are engaged in that activity. For example, if it takes you 30 minutes to mow the lawn, you would need to multiply 34 calories times 3, because there are 3 tens in 30.
5. Total the calories needed for your entire "pretend" day.
6. Were you surprised to learn how many calories your body needs?
7. What do you think would happen if your body did not have the calories that it needs? (We lose weight.) What would happen when you took in more calories than we use? (We gain weight.)
8. Read and discuss your Key Concepts!
9. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under "Key Concepts" and discuss the importance of maintaining recommended calorie levels.

 **Investigate! It's All in a Day's Work**
LAB INSTRUCTIONS

1. Review the Activity Chart on the display board.
2. Pretend that it is Saturday and that you are playing, resting and doing your chores. Include everyday activities such as dressing and walking on your list.
3. Use the student activity sheet to record the calories needed every 10 minutes of the activities you plan to do.
4. Calculate the calories needed for the length of time that you are engaged in the activity – for example, if it takes you 30 minutes to mow the lawn, you would need to multiply 46 times 3, because there are 3 tens in 30.
5. Total the calories needed for your entire “pretend” day.
6. Were you surprised to learn how many calories your body needs?
7. What do you think would happen if your body did not have the calories that it needs? (We lose weight.) What would happen when you took in more calories than we use? (We gain weight.)

Read and discuss your Key Concepts!

Did you know that your body needed so many calories just to do everyday activities and chores? What do you think would happen if your body doesn't have the calories that it needs?

Be sure to write what you have learned and stamp your

Passport to Good Health!

 Investigate! It's All in a Day's Work
Activity Chart

Activity	Calories used every 10 minutes for a 100 pound person
Bathing, sitting	5
Biking, leisurely	71
Cleaning, such as dusting, taking out trash, washing dishes.	15
Dressing and undressing	10
Frisbee	20
Gardening	30
Hopscotch	41
Housework, such as sweeping floors	23
Jumping rope	91
Making Beds	10
Mowing grass	46
Playing the piano	15
Sitting	5
Soccer	61
Walking the dog	10

Source: USDA *MyPyramid* Tracker
<http://www.mypyramidtracker.gov/default.htm>.

Investigate! It's All in a Day's Work

- A calorie is the amount of energy required to raise the temperature of 1 gram of water by 1 degree Celsius. In nutrition, we work in kilocalories, but we refer to them as Calories with a capital C.
- The calories that we need for maintenance and growth come from the foods that we eat.
- We use calories when engaged in various activities, including sitting and resting.
- The more physically active we are, the more calories we need.
- According to the USDA *MyPyramid*, 5 and 6 year old children need approximately 1400 calories each day.
- Children ages 7-9 need approximately 1600 calories each day.
- The calorie needs for older children and adults range from 1800-2800, depending on age, gender and physical activity.

Investigate! Line Them Up

Standards References

Math GLEs

Kindergarten: 3

Grade 1: 32

Grade 2: 5, 26, 30, 32

Grade 3: 2, 5, 7, 8, 13, 17, 27,
43, 47

Grade 4: 10, 13, 14

HEALTH Benchmarks

1-E-2

2-E-1

2-E-2

4-E-4

Materials

1. Food Cards (laminated)
2. Answer key (bound and laminated)
3. Container of shortening
4. 50 counters
5. 1 tsp. measuring spoon
6. Small paper plates
7. 4 calculators
8. 4 hundreds charts laminated
9. Paper and pencils
10. 1 shallow box (9x12) labeled *Learning Tools*

Activity Overview

Participants will identify the fat content of foods in restaurants by playing a game entitled *Line 'Em Up*.

Key Concepts

- Four grams of fat is equal to approximately one teaspoon of shortening.
- Our bodies need some fats. However, if a large proportion of our diet consists of fatty foods, we risk becoming overweight and having a number of health problems such as heart attack, stroke and certain cancers.
- Comparing the amounts of fats found in the foods we consume will help us make healthier choices when eating out.
- Calculating the number of teaspoons of fat that is the equivalent of total fat grams for certain foods is important in making healthy choices.

Procedure

Preparation: Print and post the Key Concepts and Lab Instructions. Print and cut apart the Food Cards. Set up all materials needed at the Explore station including the *Learning Tools* box. The food display, *Compare the Fat in These Snacks*, described in the Appendix would enhance this activity.

Part 1 – Have participants arrange the food cards in the order of fat content.

1. Look at the Food Cards provided.
2. Discuss the amount of fats that you think may be found in each food item.
3. Choose 5 cards. Work with your partner and arrange the cards in order from least to greatest based on your predications.
4. Check your answer using the answer key provided.
5. Rearrange the cards if necessary.

Part 2 – Calculate the number of teaspoons of fat in various foods.

1. Choose one food item from the Food Cards.
2. Calculate the number of teaspoons of shortening that would be equivalent to the fat content of the food item. (Each teaspoon of shortening is equal to 4 grams of fat.) Use any of the items from the *Learning Tools* box as needed.
3. Place the shortening on the plate provided. This is the amount of fat that you are consuming when you eat that particular food item.
4. Have your partner guess which food item you chose based on the amount of shortening on the plate.

Part 3

1. Read and discuss your Key Concepts! Were you surprised at the amounts of fat found in any of the foods? How will what you learned today influence your choices next time you are at a restaurant? Can you continue to enjoy your favorite foods but decrease the amount of fat in your diet?
2. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Learnings” and discuss the importance of limiting fat consumption.

 **Investigate! Line Them Up**
LAB INSTRUCTIONS

Part 1 – Arrange the food cards in the order of fat content.

1. Look at the Food Cards provided.
2. Discuss the amount of fats that you think may be found in each food item.
3. Choose 5 cards. Work with your partner and arrange the cards in order from least to greatest based on your predications.
4. Check your answer using the answer key provided.
5. Rearrange the cards if necessary.

Part 2 – Calculate the number of teaspoons of fat.

1. Choose one food item from the Food Cards.
2. Calculate the number of teaspoons of shortening that would be equivalent to the fat content of the food item. (Each teaspoon of shortening is equal to 4 grams of fat.) You may use any of the items found in the *Learning Tools* box or mental math.
3. Place the shortening on the plate provided. This is the amount of fat that you are consuming when you eat that particular food item.
4. Have your partner guess which food item you chose based on the amount of shortening on the plate.
5. Place the shortening back in its container. You may discard the plate. Thank you for cleaning up your area!

Read and discuss your Key Concepts!

Were you surprised at the amounts of fat found in any of the foods?
How will what you learned today influence your choices next time you
are at a restaurant?

Be sure to write what you have learned and stamp your
Passport to Good Health!

 Investigate! Line Them Up

Grilled Chicken
Sandwich

Roast Beef
Sandwich
(plain)

Chili Con Carne
(1 cup)

Cheese Pizza
(2 slices)

Hamburger
(regular-plain)

Bean Burrito

French Fries
(small order)

Cheeseburger
(plain)

 Investigate! Line Them Up

Fish Filet
Sandwich
(cheese and tarter sauce)

Breaded Chicken
Filet Sandwich
(with mayo)

Pepperoni Pizza
(2 slices)

Cheeseburger
(large with the works)

Chicken Nuggets
(6)

Fried Chicken
(breast and wing)

Taco
(2 small)

Investigate! Line Them Up

FOOD	FAT GRAMS
Grilled chicken sandwich	4
Chili con carne, 1 cup	7
Hamburger, regular, plain	9
French fries, small order	10
Roast beef sandwich, plain	11
Pizza, cheese, 2 slices of 12-inch pizza	11
Burrito with beans	12
Cheeseburger, regular, plain	14
Fish fillet sandwich, with cheese & tartar sauce	16
Pizza, pepperoni, 2 slices of 12-inch pizza	17
Chicken nuggets, 6	18
Taco, 2 small	22
Fried chicken, breast and wing	28
Breaded chicken fillet sandwich with mayo	30
Cheeseburger, large, with the "works"	30

Investigate! Line Them Up

- Four grams of fat is equal to approximately one teaspoon of shortening.
- Our bodies need some fats, but if a large proportion of our diet consists of fatty foods, we risk becoming overweight and having a number of health problems such as heart attack, stroke and certain cancers.
- Comparing the amounts of fats found in the foods we consume will help us make healthier choices when eating out.
- Calculating the number of teaspoons of fat that is the equivalent of total fat grams for certain foods that may be ordered is also important in making healthy choices.
- Choose regular sandwiches instead of doubles, and plain types instead of those with lots of extras, such as cheese, bacon and “special” sauces.
- Grilled or broiled sandwiches are lower in fat than fried sandwiches.
- Pizza toppings can add a lot of fat. Choose plain cheese pizza or pizza made with vegetable toppings. These kinds of pizza are lower in fat than pizza made with sausage, pepperoni or other meat toppings.
- Foods eaten at a restaurant can be part of a healthy diet if you make the right choices.

Investigate! Portions vs. Servings: One Size Does NOT Fit All

Standards References

Math GLEs

Grade K: 11, 15

Grade 1: 6, 24

Grade 2: 2, 11, 14, 17

Grade 3: 3, 17, 21, 25, 28

Grade 4: 6, 9, 22, 24, 27

HEALTH Benchmarks

1-E-2

1-E-3

3-E-1

4-E-4

Materials

1. Paper plates and bowls
2. 2 spring scales
3. 2 – 4 sets measuring cups
4. 3 serving spoons
5. 2 Tongs
6. Rolls, one dozen
7. Deli turkey, sliced, 1 lb.
8. Canned corn
9. Canned green beans
10. Green salad
11. Paper towels
12. Tray for meat and bread
13. Fraction Pieces
(not labeled)
14. Garbage bag or trash can

Activity Overview

Participants will compare portions to the recommended serving sizes as outlined in the new Food Pyramid developed by the USDA based on age, gender and physical activity.

Key Concepts

- *MyPyramid* is a customized plan based on one's age, gender and physical activity. Each individual's plan includes the number of servings recommended from each of the 5 food groups.
- Recommended servings are generally much smaller than the portions that we often pile on our dinner plate!
- One serving varies according to the food type and preparation.
- Measuring portions ensures that the amount of food consumer will not exceed the recommended serving sizes.
- When it is not convenient to measure servings, use the "body benchmarks" to estimate the quantity.

Procedure

Preparation: Post the Key Concepts and Single Servings Charts at the Explore Station. Arrange the foods in bowls with serving spoons like family-style meal service. Make 1 copy of the Student activity sheet, Portions vs. Servings.

1. Look at the food items and select 1 salad, 1 entrée, 2 vegetables and bread.
2. Using the salad bowls and paper plates, place the portions that you would normally eat on your plate as if you were at a buffet or at home.
3. Estimate the amount of each of your selections using cups for the salad and vegetables and ounces for the meat and bread.
4. Record your estimations on the student activity sheet Part A.
5. Review the Single Servings page and note the recommended serving sizes that correspond with your meal choices.
6. Using the measuring cups and the spring scale, measure the same foods chosen for your meal and place the recommended servings on another plate.
7. Compare the portions that you dished up to the servings that you measured. Which are larger? Discuss your findings with your partner.
8. Look at the Fraction Pieces in the basket. If the black rectangle represents 1 whole cup, what color would be equivalent to $\frac{1}{2}$ c.? $\frac{1}{4}$ c.? Which is larger – $\frac{1}{2}$ c. or $\frac{1}{4}$ c.? How many $\frac{1}{2}$ c. would it take to equal 3 whole c.? Record your findings on the student activity sheet Part B.
9. Calculate the amount of each food item that you would need to prepare for a family of 5 based on the recommended serving size and record your answers on the student activity sheet Part C.
10. Read and discuss your Key Concept! Write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under "Key Concepts" and discuss the difference between a "portion" and the recommended serving size of grains, meats and vegetables.

 Investigate! Portions vs. Servings:
One Size Does NOT Fit All
LAB INSTRUCTIONS

1. Look at the food items and select 1 salad, 1 entrée, 2 vegetables and bread.
2. Using the salad bowls and paper plates, place the portions that you would normally eat on your plate as if you were at a buffet or at home.
3. Estimate the amount of each of your selections using cups for the salad and vegetables and ounces for the meat and bread.
4. Record your estimations on the student activity sheet Part A.
5. Put your meal aside for a moment.
6. Review the *Single Servings* posted. Locate the recommended serving size that corresponds with your meal choices.
7. Using the measuring cups and the spring scale, measure the same foods chosen for your meal and place the recommended servings on another plate.
8. Compare the portions that you dished up to the servings that you measured. Which are larger? Discuss your findings with your family.
9. Place all food items back in the appropriate containers. Discard your used paper plates.
10. Look at the Fraction Pieces in the basket. If the black rectangle represents 1 whole cup, what color would be equivalent to $\frac{1}{2}$ cup? $\frac{1}{4}$ cup? Which is larger – $\frac{1}{2}$ cup or $\frac{1}{4}$ cup? How many $\frac{1}{2}$ cup(s) would it take to equal 3 whole cups? Record your findings on the student activity sheet Part B.
11. Calculate the amount of each food item that you would need to prepare for a family of five based on the recommended serving size and record your answers on the student activity sheet Part C.

Read and discuss your Key Concepts!

What did you learn about serving sizes? Do you need to decrease the size of your portions at mealtime?

Be sure to write what you have learned and stamp your
Passport to Good Health!

Investigate! Portions vs. Servings Single Servings

Fruit Group

(Choose fresh, frozen, or canned fruit packed in water or unsweetened juice)

- $\frac{1}{2}$ cup fruit
- $\frac{1}{4}$ cup dried fruit
- $\frac{3}{4}$ cup 100% fruit juice
- 1 medium whole fresh fruit

Vegetable Group

(Choose fresh, frozen, or canned)

- 1 cup raw leafy green vegetables
- $\frac{1}{2}$ cup cut-up raw, canned or cooked vegetables

Meat and Beans

(Choose lean meat, fish, or poultry with the skin removed)

- $\frac{1}{2}$ cup cooked dry, canned or frozen beans
- 1-3 ounces of meat
- 1 egg
- 1 Tbsp. peanut butter

Grains

(Make half your grain servings whole grains)

- 1 slice bread
- $\frac{1}{2}$ hamburger bun
- $\frac{1}{2}$ cup cooked rice, pasta, or cooked cereal

 Investigate! Portions vs. Servings
Student Activity Sheet

Part A: Estimation

1. Salad _____ cup(s)
2. Meat _____ ounces
3. Vegetables:
_____ cup(s)
_____ cup(s)
4. Bread _____ ounce(s)

Part B: Equivalents

1. Which is greater- $\frac{1}{2}$ cup or $\frac{1}{4}$ cup? _____
2. How many $\frac{1}{2}$ cups = 1 cup? _____
3. How many $\frac{1}{4}$ cups = 1 cup? _____

4. How many $\frac{1}{2}$ cups = 2 cups? _____
5. How many $\frac{1}{2}$ cups = 3 cups? _____
6. About how much is a handful of corn? _____

Part C: Calculations

In order to feed a family of 5, I would need to prepare the following:

- _____ cups of salad
- _____ ounces of meat
- _____ cups of vegetables
- _____ ounces of bread



Investigate! Portions vs. Servings: One Size Does NOT Fit All

- In 2005, the USDA introduced MyPyramid, a new pyramid that provides a customized plan based on one's age, gender and physical activity.
 - Children ages 5-6 who engage in 30-60 minutes of physical activity need 3 servings of fruits, 3 servings of vegetables, 5 ounces or the equivalent of grains, 4 ounces or the equivalent of lean meat and beans, 2 cups of milk, and no more than 17grams of oils each day. (Based on 1400 calories)
 - Children ages 7-9 need the following: 3 servings of fruits, 4 servings of vegetables, 5 ounces or the equivalent of grains, 5 ounces or the equivalent of lean meat and beans, 3 cups of milk, and no more than 22 grams of oils each day. (Based on 1600 calories)
 - A 35-year-old female should consume 4 servings of fruits, 5 servings of vegetables, 6 ounces or the equivalent of grains, 5.5 ounces or the equivalent of lean meat and beans, 3 cups of milk, and no more than 27 grams of oils each day. (Based on 2000 calories)
 - A 35-year-old male who engages in 30-60 minutes of physical activity needs 4 servings of fruits, 7 servings of vegetables, 9 ounces or the equivalent of grains, 6.5 ounces or the equivalent of lean meat and beans, 3 cups of milk, and no more than 34 grams of oils each day. (Based on 2600 calories)
- Recommended servings are generally much smaller than the portions that we often pile on our dinner plates! Measuring portions ensures that the amounts you are consuming do not exceed the recommended serving size.
- One serving includes the following: 1 cup leafy green vegetables, ½ cup canned or cooked vegetables, fruit, or beans, ¼ cup dried fruit, ¾ cup fruit juice, 3 ounces of meat, 1 slice bread, ½ hamburger bun, ½ cup cooked rice, pasta, or cooked cereal, and 1 egg counts as 1 ounce of meat.
- When it isn't convenient to measure your servings, use the following “body benchmarks” to estimate the quantity:
 - 1 cup of cereal is about the size of a fist
 - 1 ounce of cheese is about the size of your thumb
 - 3 ounces cooked meat is about the size of the palm of your hand
 - ½ cup cooked rice or pasta will fit in your hand
 - 1 teaspoon butter is the size of a fingertip
 - 1 ounce of nuts is one handful

Investigate! A Spoonful of Sugar

Standards References

Math GLEs

Grade 3: 8, 13, 15, 17, 25, 28, 39, 43

Grade 4: 13, 14, 15, 21, 22, 36

HEALTH Benchmarks

1-E-2

2-E-1

2-E-2

4-E-4

Materials

1. One 1 lb. bag of sugar
2. Covered container for sugar
3. 1 simple balance scale
4. 1000 centimeter cubes
5. 1 tsp. measuring spoon
6. One 1-cup containers labeled *Estimation* and *Exact Measure*
7. 4 calculators
8. 4 hundreds charts laminated
9. 100 counters
10. Paper and pencils
11. 1 shallow box (9x12) labeled *Learning Tools*
12. Copies of data chart-A Spoonful of Sugar
13. Assortment of popular snack food items such as soda, instant fruit-flavored beverage, 100% fruit juice candy bars, pop-tarts, and granola bars
14. Tray for food items

Activity Overview

Participants will construct a visual designed to create an awareness of high levels of refined, added sugar found in popular snack food items and sodas.

Key Concepts

- Most Americans consume too much sugar, which leads to health problems such as obesity and tooth decay.
- Sugar or sucrose is defined as a simple carbohydrate derived from sugar cane and sugar beets. Other sugars on the market include fructose, high fructose corn syrup, glucose, lactose and maltose.
- A can of cola contains 10 teaspoons of sugar.
- One teaspoon of sugar weighs 4 grams and contains 16 calories or 4 calories per gram.
- Popular snack items contain large amounts of sugar and have very little nutritional value.
- Students should be able to use a variety of strategies to solve math problems

Procedure

Preparation: Print the Lab Instructions and Key Concepts on heavy cardstock and place at the Explore Station. Set up all materials needed at the station. Make copies of the student activity sheet. Make sure all containers are clearly labeled as to their contents. Use the *Learning Tools* box to organize your materials.

1. Measure exactly 10 level teaspoons of sugar using the measuring spoon and place it in the container labeled *Exact Measure*. This is the amount of sugar found in one 12-ounce can of cola. Each teaspoon of sugar is equal to 4 grams and contains 16 calories.
2. Calculate the grams of sugar that are equivalent to 10 teaspoons of sugar.
3. Check your answer by placing the 10 teaspoons of sugar in one side of the balance and the cm cubes in the other side of the balance.
4. Choose the snack items from the tray that you might eat on a given day and locate the Nutrition Facts Food Label on each item.
5. Using the data chart on your activity sheet, list the amount of sugar in grams found in each of your choices.
6. You know that 4 grams is equal to 1 teaspoon of sugar. What strategy would you use to measure the amount of sugar in teaspoons found in your snack choices?
7. Do you consume more or less than the amount of sugar that you estimated in step 6? How much more? How much less?
8. Read and discuss your Key Concepts! What did you learn about your sugar intake? Do you need to make healthier choices when purchasing snack items?
9. Write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss the importance of limiting sugar consumption.

Investigate! A Spoonful of Sugar

LAB INSTRUCTIONS

1. Measure exactly 10 level teaspoons of sugar using the measuring spoon and place it in the container labeled *Exact Measure*. This is the amount of sugar found in one 12-ounce can of cola as well as most sodas. Each teaspoon of sugar is equal to 4 grams.
2. Calculate the number of grams that would be equivalent to 10 teaspoons of sugar. You may use any of the items in the *Learning Tools* box or mental math. Count the number of centimeter cubes that you calculated would equal 10 teaspoons of sugar. (Each cm cube weighs exactly 1 gram.)
3. Check your answer by placing the 10 teaspoons of sugar and the cm cubes in the trays on the balance scale in the appropriate trays. Does the scale balance? If so, your answer is correct!
4. Think about your estimation of how many teaspoons of sugar that you think you consume each day and make necessary adjustments.
5. Choose the snack items from the tray that you might eat on a given day and locate the Nutrition Facts Food Label on each item.
6. Using the data chart on your activity sheet, list the amount of sugar in grams found in each of your choices.
7. You know that 4 grams is equal to 1 teaspoon of sugar. What strategy would you use to measure the amount of sugar in teaspoons found in your snack choices? Show your thinking using words, numbers or pictures. Use the back of your activity sheet and record your results in the appropriate column on your data chart.
8. Do you consume more or less than the amount of sugar that you estimated in step 4? How much more? How much less?
9. Place the sugar and the cm cubes back in their original containers. Thank you for cleaning up your area!

Read and discuss your Key Concepts!

What did you learn about your sugar intake? Do you need to make healthier choices when purchasing snack items?

Be sure to write what you have learned and stamp your

Passport to Good Health!

Investigate! A Spoonful of Sugar Student Activity Sheet

Snack Food	Sugars in Grams	Teaspoons of Sugar

Challenge your brain!

**You know that one can of soda contains 40g of sugar.
How many grams would there be in:**

a) 5 cans?

b) 10 cans?

c) 100 cans?

Don't forget to show your work and explain your thinking!

Investigate! A Spoonful of Sugar

- Health experts agree that most Americans eat too much sugar, which leads to many health problems, including obesity and tooth decay.
- Sugar, or sucrose, is defined as a simple carbohydrate derived from sugarcane and sugar beets. Other sugars on the market include fructose, glucose, lactose, maltose, and high fructose corn syrup.
- MyPyramid and other dietary guidelines suggest drinking beverages and choosing snacks with little added sugar or sweeteners.
- Popular snack food items contain large amounts of sugar and have very little nutritional value.
- Sugar can be found on the Nutrition Facts food label under “Total Carbohydrate.” Keep in mind that the sugars listed here include naturally occurring sugars, like those in fruit or milk, as well as those added to a food or drink.
- You can find the specific types of sugars (listed above) in the list of ingredients.
- The USDA recommends that discretionary calories not exceed 130 per day for children ages 7-9.
- The average can of soda contains 10 teaspoons of sugar and 160 calories.
- One teaspoon weighs 4 grams and contains 16 calories or 4 calories per gram.
- There are many ways to reduce the amount of sugar in your daily diet. Always read the nutrition facts label and the ingredient list and avoid purchasing food with high sugar content. Another option is to replace high sugar snack foods with fresh fruit, which contain only natural sugar.

Investigate! Time to Move!

Standards References

Math GLEs:

Grade 1: 15, 18, 21

Grade 2: 5, 8, 9, 12, 16

Grade 3: 11, 17, 24

Grade 4: 23

HEALTH Benchmarks

1-E-2

1-E-3

2-E-2

3-E-1

3-E-2

4-E-4

5-E-6

Materials

1. 4 calculators
2. 4 student clocks
3. Pencils and paper
4. 4 Hundred's Charts
5. *Learning Tools* box

Activity Overview

Participants will create a Weekly Activity Chart, which meets the daily recommendations for physical activity according to the U.S. Dietary Guidelines.

Key Concepts

- The U.S. Dietary Guidelines recommends that children participate in at least 60 minutes of moderate-intensity physical activity most days of the week, preferably daily.
- The recommendation for adults is at least 30 minutes of moderate-intensity activities 5 or more days per week or vigorous-intensity activities 3 or more days per week for 20 or more minutes per session.
- Regular exercise has many health benefits including weight control, decreased blood pressure, stronger bones and muscles, stress relief and feeling good about oneself.

Procedure

Preparation: Print the Key Concepts, Lab Instructions, Activity Lists and Weekly Activity Chart on heavy cardstock and place at the Explore Station. Copy one student activity sheet for each family. Set up all materials needed at the station.

1. Review the Weekly Activity Chart on the display board.
2. Calculate the total number of minutes of physical activity for each day and record the totals in Part A of the student activity sheet provided.
3. Are the totals at least 60 minutes per day? (You need at least 1 hour of physical activity per day.) If your answer is no, how many more minutes are needed to have a minimum of 60 minutes per day? Record your answers on the activity sheet.
4. List the days of the week from Part A where the number of minutes is equal to or greater than 1 hour.
5. Write the time spent using hours and minutes.
6. Look at the Activity Lists for students and adults.
7. Think about activities that interest you and ones that you may like to try.
8. Create your own Weekly Activity Chart at home!
9. Read and discuss your Key Concepts!
10. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss the importance of making physical activity part of a family’s daily routine.

 Investigate! Time to Move!
LAB INSTRUCTIONS

1. Review the Weekly Activity Chart on the display board.
2. Calculate the total number of minutes of physical activity for each day and record the totals in Part A of the student activity sheet provided.
3. Are the totals at least 60 minutes per day? (You need at least 1 hour of physical activity per day.) If your answer is no, how many more minutes are needed to have a minimum of 60 minutes per day? Record your answers on the activity sheet.
4. List the days of the week from Part A where the number of minutes was equal to or greater than 1 hour.
5. Write the time spent using hours and minutes.
6. Look at the Activity Lists for students and adults.
7. Think about activities that interest you and ones that you may like to try.
8. Create your own Weekly Activity Chart at home! Go to http://www.bam.gov/sub_physicalactivity/cal_index.asp.

Read and discuss your Key Concepts!

Do you think that you participate in at least 60 minutes of physical activity each day? What are some activities that you would like to try in order to increase your daily activity?

Be sure to write what you have learned and stamp your
Passport to Good Health!

 Investigate! Time to Move!
Adult Activity List

Moderate Activity

Walking for pleasure
Walking the dog
Hiking
Roller Skating - leisurely pace
Bicycling
General home exercises
Aerobic dancing
Yoga
Golf
Softball
Basketball-shooting baskets
Coaching sports
Playing Frisbee
Swimming-recreational
Gardening and yard work
Mowing the lawn
Actively playing with children
Home repair-light

Vigorous Activity

Jogging or running
Roller skating-brisk pace
Bicycling more than 10 mph
Aerobic dancing-high impact
Calisthenics
Jumping rope
Jumping jacks
Football game
Basketball game
Soccer
Kickball
Swimming-steady laps
Heavy gardening and yard work
Home repair or construction

 Investigate! Time to Move!
Student Activity List

Baseball
Basketball
Bicycling
Cheerleading
Dance Team
Football
Frisbee
Golf
Hiking
Inline Skating
Jump Rope
Kickball
Push-Ups
Sit-Ups
Soccer
Softball
Swimming
Tetherball
Track and Field
Walking the dog
Participating in P.E. class
Participating in recess

 Investigate! Time to Move!
Student Activity Sheet

Part A:

Day of the Week	Total Minutes of Physical Activity Done	Number of Minutes Needed to Total 1 Hour, if Less than 60 Minutes
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		

Part B:

List the days of the week from Part A where the number of minutes was equal to or greater than 60. Write the time using hours and minutes.

1. _____ hours _____ min.
2. _____ hours _____ min.
3. _____ hours _____ min.

To create your own Weekly Activity Chart online, visit
http://www.bam.gov/sub_physicalactivity/cal_index.asp.


Investigate! Time to Move!
Weekly Activity Chart
Sample

Day of the Week	Total Minutes of Physical Activity Done	Number of Minutes Needed to Total 1 Hour, if Less than 60 Minutes
Sunday	Baseball: 30 minutes Bicycling: 30 minutes Sit ups: 15 minutes Walking the dog: 15 minutes	
Monday	Walking the dog: 15 minutes Recess: 15 minutes PE class: 30 minutes	
Tuesday	PE class: 30 minutes Walking the dog: 15 minutes	15 minutes
Wednesday	PE class: 30 minutes Walking the dog: 15 minutes	15 minutes
Thursday	Bicycling: 15 minutes Baseball: 30 minutes Walking the dog: 15 minutes Recess: 15 minutes	
Friday	Walking the dog: 15 minutes Bicycling: 15 minutes	30 minutes
Saturday	Baseball: 45 minutes Mowing the lawn: 30 minutes	

Investigate! Time to Move!

- According to the U.S. Dietary Guidelines, physical activity done at a moderate-intensity level is a healthy habit.
- Regular exercise has many health benefits including weight control, decreased blood pressure, stronger bones and muscles, stress relief and feeling good about oneself.
- Children should participate in at least 60 minutes of moderate-intensity physical activity most days of the week, preferably daily.
- The recommendation for adults is at least 30 minutes of moderate-intensity physical activity 5 or more days per week or vigorous-intensity physical activity 3 or more days per week for 20 or more minutes per session.
- It is important to choose activities that interest you. Start out slowly and gradually build to higher levels in order to prevent injury.
- **LIMIT THE TIME YOU WATCH TELEVISION OR PLAY VIDEO GAMES!**
- Parents play an important role in shaping their children's attitudes toward physical activity. Set an example by being active yourself. Provide opportunities for your children to be active such as team or individual sports, skating, bicycling or just free time play.
- Create your own weekly activity chart at home. Go to http://www.bam.gov/sub_physicalactivity/cal_index.asp.
- It's time to MOVE!

Investigate! Where Do I Belong?

Standards References

Math GLEs:

Pre-K: 1, 5

K: 1, 2, 8, 9, 10, 11

Grade 1: 1, 10, 15, 18, 33

Grade 2: 5, 8

Grade 3: 40

HEALTH Benchmarks

1-E-2

3-E-1

3-E-2

4-E-4

5-E-6

Materials

1. Venn Diagram- two enlarged to at least 11 by 17 inches and laminated
2. 2 sets of Food Cards- cut and laminated

Activity Overview

Participants will categorize familiar foods and construct a Venn Diagram based on the food group to which the foods belong.

Key Concepts

- All foods can be categorized into 5 basic groups:
 - Grains,
 - Vegetables,
 - Fruits,
 - Milk, and
 - Meat and Beans.
- Some prepared foods may belong to more than one group.
- Our bodies need foods from all 5 groups in order to stay healthy.
- Sorting familiar foods by food groups helps us stay within the recommended daily allowance as set forth by the USDA.

Procedure

Preparation: Print the Key Concepts, Lab Instructions, MyPyramid posters, Answer Key and Food Cards on heavy cardstock and place at the Explore Station. Enlarge and laminate two Venn Diagrams. Copy one Venn Diagram template for each family to take home. Set up all materials needed at the station.

1. Review the MyPyramid poster on the display board.
2. Look at the food cards provided.
3. To which food group do you think each food item would belong?
4. Do you think that some of the foods might belong to more than one food group?
5. Using the Venn Diagram, place each food card in the category where you feel it belongs. Discuss your ideas with your adult partner.
6. Check your answers using the answer key.
7. How many foods belonged in the section for **only** Grains? How many foods belonged in the section for **only** Meat and Beans?
8. How many foods belonged in **both** food groups?
9. Count the **total** number of foods that belonged to the grain group. Now find the **total** number of foods that belonged under meat and beans heading. Discuss your answers with your partner.
10. Create your own Venn Diagram at home with the blank template provided.
11. Read and discuss your Key Concepts!
12. Be sure to write what you have learned and stamp your *Passport to Good Health!*

Closure/Evaluation

After completing the activity, families read the information found under “Key Concepts” and discuss what they learned about the 5 food groups.

Investigate! Where Do I Belong? LAB INSTRUCTIONS

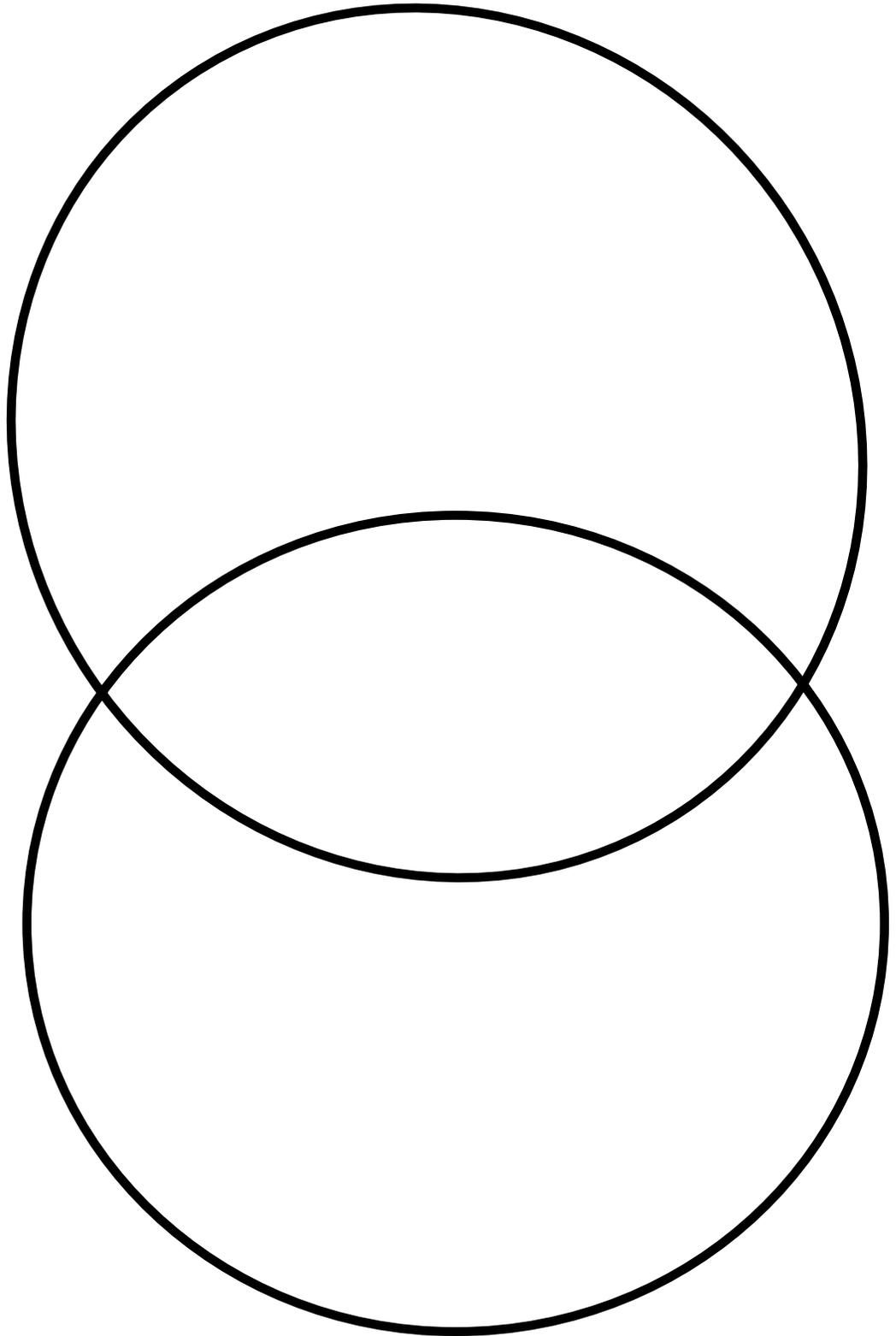
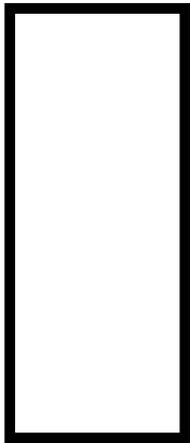
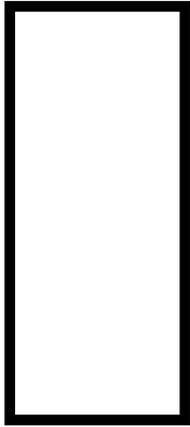
1. Review the MyPyramid poster on the display board.
2. Look at the food cards provided.
3. To which food group do you think each food item would belong?
4. Do you think that some of the foods might belong to more than one food group?
5. Using the Venn Diagram, place each food card in the category where you feel it belongs. Discuss your ideas with your adult partner.
6. Check your answers using the answer key.
7. How many foods belonged in the section for **only** Grains? How many foods belonged in the section for **only** Meat and Beans?
8. How many foods belonged in **both** food groups?
9. Count the **total** number of foods that belonged to the grain group. Now find the **total** number of foods that belonged under meat and beans heading. Discuss your answers with your partner.
10. Create your own Venn Diagram at home with the blank template provided.

Read and discuss your Key Concepts!

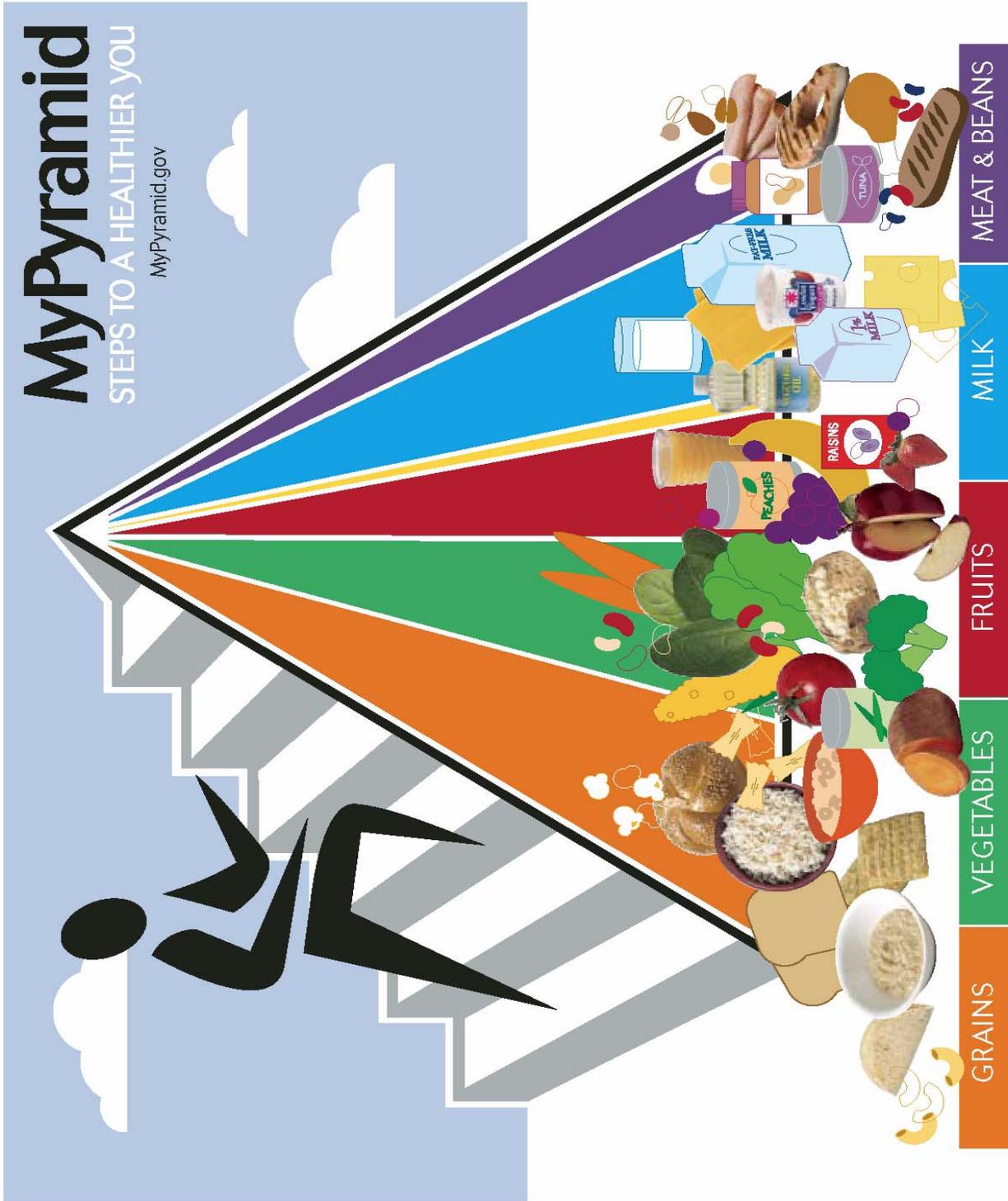
Can a food belong to more than two groups? Does a pepperoni pizza contain more than two food groups? To which food groups does a hamburger with a patty, bun, lettuce, and tomato belong?

Be sure to write what you have learned and stamp your
Passport to Good Health!

 Investigate! Where Do I Belong?
Venn Diagram Template



Investigate! Where Do I Belong?
MyPyramid



Investigate! Where Do I Belong? MyPyramid

<p>GRAINS Make half your grains whole</p> <p>Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice, or pasta every day</p> <p>1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or 1/2 cup of cooked rice, cereal, or pasta</p>	<p>VEGETABLES Vary your veggies</p> <p>Eat more dark-green veggies like broccoli, spinach, and other dark leafy greens</p> <p>Eat more orange vegetables like carrots and sweetpotatoes</p> <p>Eat more dry beans and peas like pinto beans, kidney beans, and lentils</p>	<p>FRUITS Focus on fruits</p> <p>Eat a variety of fruit</p> <p>Choose fresh, frozen, canned, or dried fruit</p> <p>Go easy on fruit juices</p>	<p>MILK Get your calcium-rich foods</p> <p>Go low-fat or fat-free when you choose milk, yogurt and other milk products</p> <p>If you don't or can't consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages</p>	<p>MEAT & BEANS Go lean with protein</p> <p>Choose low-fat or lean meats and poultry</p> <p>Bake it, broil it, or grill it</p> <p>Vary your protein routine – choose more fish, beans, peas, nuts, and seeds</p>
<p>For a 2,000-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to MyPyramid.gov.</p>				
<p>Eat 6 oz. every day</p>	<p>Eat 2 1/2 cups every day</p>	<p>Eat 2 cups every day</p>	<p>Get 3 cups every day; for kids aged 2 to 8, it's 2</p>	<p>Eat 5 1/2 oz. every day</p>
<p>Find your balance between food and physical activity</p> <ul style="list-style-type: none"> Be sure to stay within your daily calorie needs. Be physically active for at least 30 minutes most days of the week. About 60 minutes a day of physical activity may be needed to prevent weight gain. For sustaining weight loss, at least 60 to 90 minutes a day of physical activity may be required. Children and teenagers should be physically active for 60 minutes every day, or most days. 		<p>Know the limits on fats, sugars, and salt (sodium)</p> <ul style="list-style-type: none"> Make most of your fat sources from fish, nuts, and vegetable oils. Limit solid fats like butter, stick margarine, shortening, and lard, as well as foods that contain these. Check the Nutrition Facts label to keep saturated fats, trans fats, and sodium low. Choose food and beverages low in added sugars. Added sugars contribute calories with few, if any, nutrients. 		



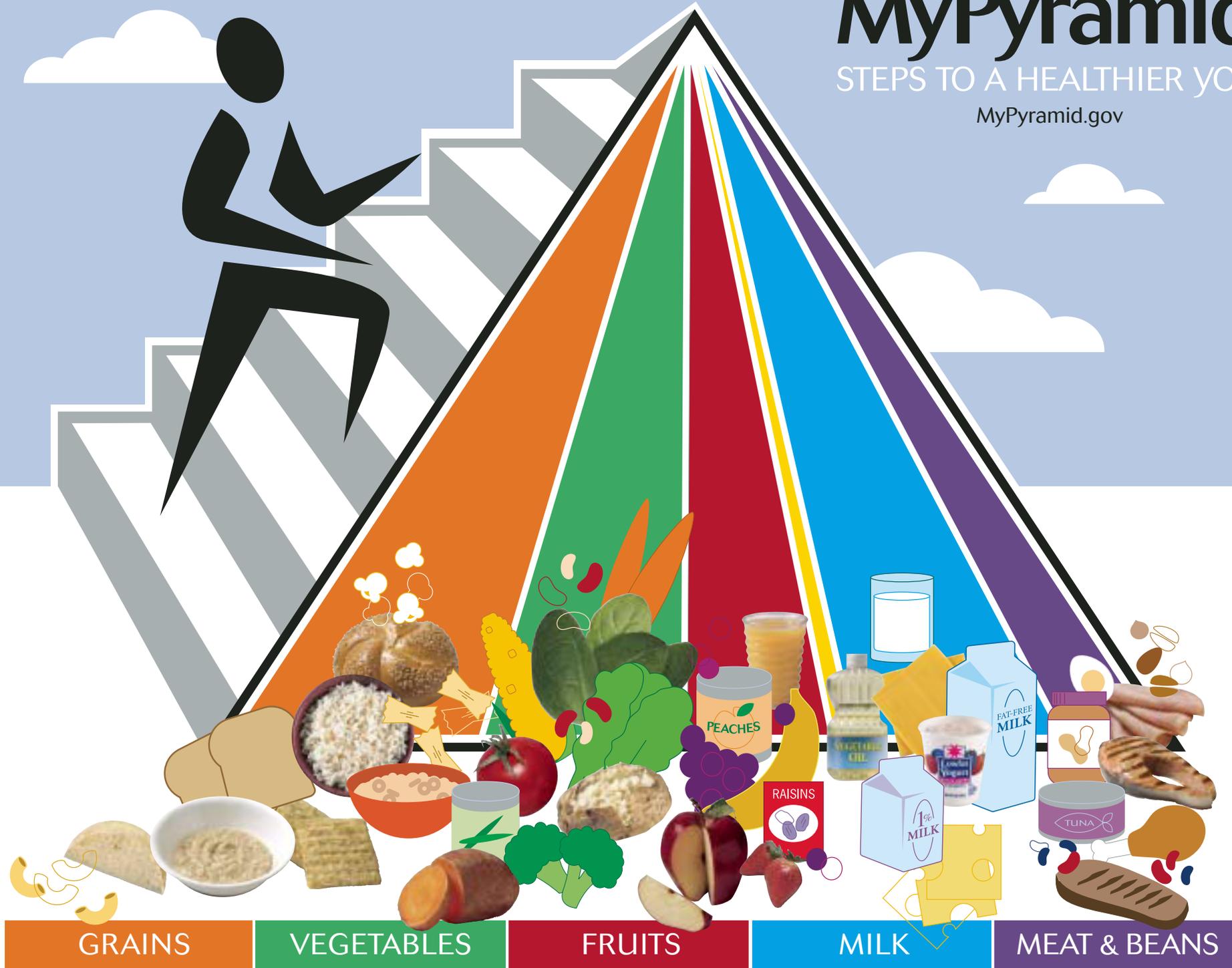
U.S. Department of Agriculture
Center for Nutrition Policy and Promotion
April 2005
CNPP-15

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MyPyramid

STEPS TO A HEALTHIER YOU

MyPyramid.gov



GRAINS

VEGETABLES

FRUITS

MILK

MEAT & BEANS

GRAINS Make half your grains whole	VEGETABLES Vary your veggies	FRUITS Focus on fruits	MILK Get your calcium-rich foods	MEAT & BEANS Go lean with protein
<p>Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice, or pasta every day</p> <p>1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or 1/2 cup of cooked rice, cereal, or pasta</p>	<p>Eat more dark-green veggies like broccoli, spinach, and other dark leafy greens</p> <p>Eat more orange vegetables like carrots and sweetpotatoes</p> <p>Eat more dry beans and peas like pinto beans, kidney beans, and lentils</p>	<p>Eat a variety of fruit</p> <p>Choose fresh, frozen, canned, or dried fruit</p> <p>Go easy on fruit juices</p>	<p>Go low-fat or fat-free when you choose milk, yogurt, and other milk products</p> <p>If you don't or can't consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages</p>	<p>Choose low-fat or lean meats and poultry</p> <p>Bake it, broil it, or grill it</p> <p>Vary your protein routine – choose more fish, beans, peas, nuts, and seeds</p>

For a 2,000-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to MyPyramid.gov.

Eat 6 oz. every day	Eat 2 1/2 cups every day	Eat 2 cups every day	Get 3 cups every day; for kids aged 2 to 8, it's 2	Eat 5 1/2 oz. every day
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Find your balance between food and physical activity

- Be sure to stay within your daily calorie needs.
- Be physically active for at least 30 minutes most days of the week.
- About 60 minutes a day of physical activity may be needed to prevent weight gain.
- For sustaining weight loss, at least 60 to 90 minutes a day of physical activity may be required.
- Children and teenagers should be physically active for 60 minutes every day, or most days.



Know the limits on fats, sugars, and salt (sodium)

- Make most of your fat sources from fish, nuts, and vegetable oils.
- Limit solid fats like butter, stick margarine, shortening, and lard, as well as foods that contain these.
- Check the Nutrition Facts label to keep saturated fats, *trans* fats, and sodium low.
- Choose food and beverages low in added sugars. Added sugars contribute calories with few, if any, nutrients.




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 CNPP-15



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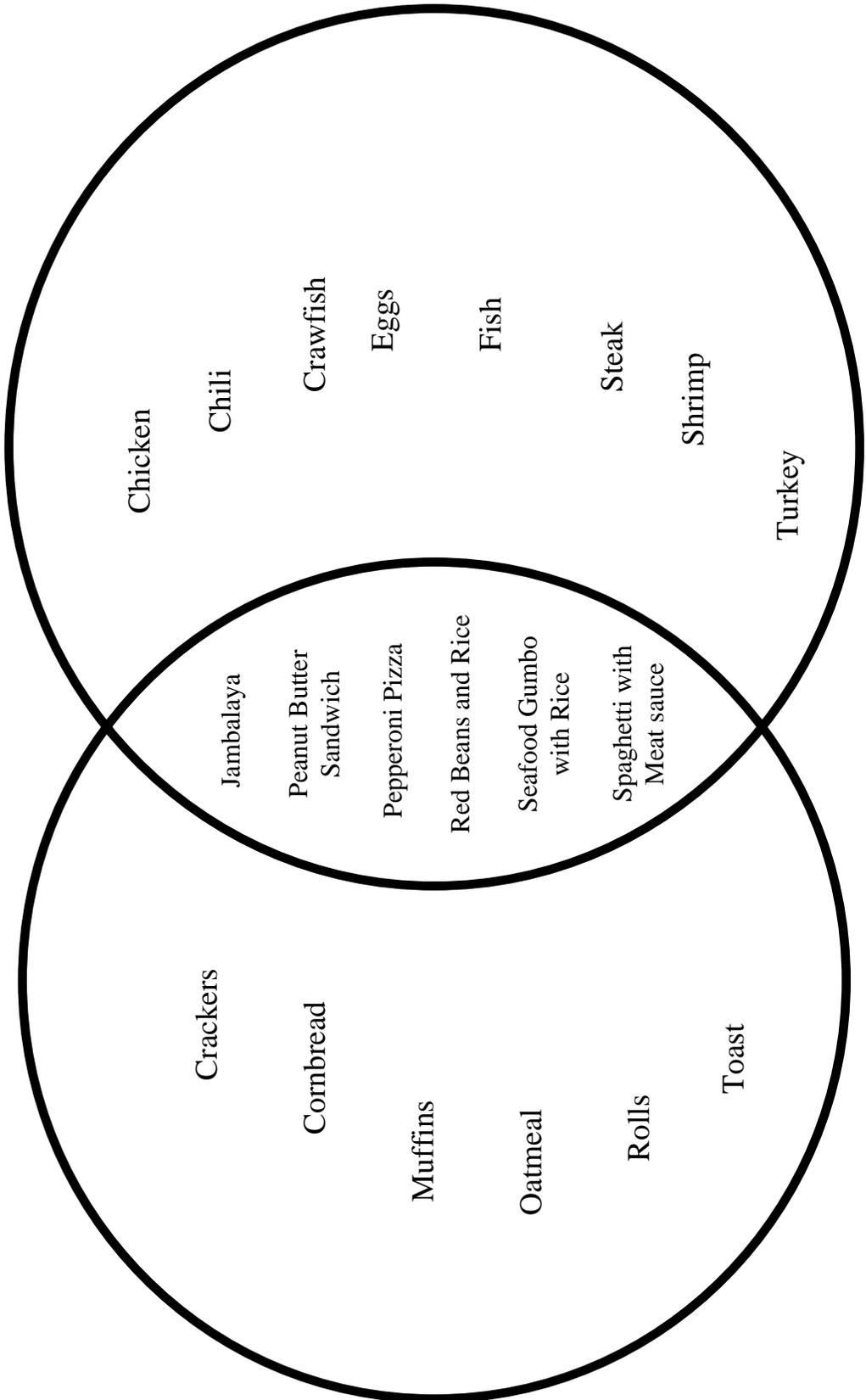
 Investigate! Where Do I Belong?
Familiar Foods Cards

Toast	Fish	Jambalaya
Oatmeal	Turkey	Spaghetti with Meatsauce
Rolls	Chicken	Pepperoni Pizza
Cornbread	Shrimp	Peanut Butter Sandwich
Eggs	Chili	Seafood Gumbo with Rice
Crackers	Crawfish	Red Beans and Rice
Muffins	Steak	

 Investigate! Where Do I Belong?
Answer Key

Meat and Beans

Grains



Investigate! Where Do I Belong?

- All foods can be categorized into 5 basic groups:
 - Grains
 - Vegetables
 - Fruits
 - Milk
 - Meat and Beans
- Some prepared foods may belong to more than one group.
- Beans can be in either the vegetable or the meat and beans group. Beans can be a lean protein choice if prepared without lots of extra fat.
- Our bodies need foods from all 5 groups in order to stay healthy.
- Sorting familiar foods by food groups helps us stay within the recommended daily allowance as set forth by the USDA.
- In general, Americans consume too much meat and grains and not enough fruits and vegetables.
- The more children learn about a balanced diet at a young age, the more likely they are to make healthier choices later in life.
- Parents and students can use *MyPyramid* to make smart choices about foods served and eaten.
- Remember to eat a variety of foods within each food group.
- Do not eat too much food from one food group and do not eliminate any food group.
- To learn more about food groups and recommended daily allowances, visit <http://www.mypyramid.gov/>.