Unit 4:
Math & Nutrition

Real World Math

Name _____

Period _____

Day 1: Food Groups & Setting Nutritional Goals

1. Read the following 10 tips from the USDA making healthy food choices.

10 tips
Nutrition Education Series

choose MyPlate

10 tips to a great plate

Making food choices for a healthy lifestyle can be as simple as using these 10 Tips. Use the ideas in this list to *balance your calories*, to choose foods to *eat more often*, and to cut back on foods to *eat less often*.

1 balance calories

Find out how many calories YOU need for a day as a first step in managing your weight. Go to www.ChooseMyPlate.gov to find your calorie level. Being physically active also helps you balance calories.

2 enjoy your food, but eat less

Take the time to fully enjoy your food as you eat it. Eating too fast or when your attention is elsewhere may lead to eating too many calories. Pay attention to hunger and fullness cues before, during, and after meals. Use them to recognize when to eat and when you've had enough.

3 avoid oversized portions

Use a smaller plate, bowl, and glass. Portion out foods before you eat. When eating out, choose a smaller size option, share a dish, or take home part of your meal.

4 foods to eat more often

Eat more vegetables, fruits, whole grains, and fat-free or 1% milk and dairy products. These foods have the nutrients you need for health—including potassium, calcium, vitamin D, and fiber. Make them the basis for meals and snacks.

5 make half your plate fruits and vegetables

Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert.

6 switch to fat-free or low-fat (1%) milk

They have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

7 make half your grains whole grains

To eat more whole grains, substitute a whole-grain product for a refined product—such as eating whole-wheat bread instead of white bread or brown rice instead of white rice.

8 foods to eat less often

Cut back on foods high in solid fats, added sugars, and salt. They include cakes, cookies, ice cream, candies, sweetened drinks, pizza, and fatty meats like ribs, sausages, bacon, and hot dogs. Use these foods as occasional treats, not everyday foods.

9 compare sodium in foods

Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled "low sodium," "reduced sodium," or "no salt added."

10 drink water instead of sugary drinks

Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar, and calories, in American diets.

2. It is important that you can identify food groups so you can make healthy choices.

Grains	Vegetables	Fruits	Dairy	Protein Foods	Added Sugars &/ or Saturated Fats
Brown Rice	Collard Greens	Avocado	Frozen Yogurt	Peanut Butter	Soda
Oatmeal	Asparagus	Banana	Strawberry Milk	Black Beans	Cupcake
Potato Bread	Kale	100% Juice	Almond Milk	Ribs	Candy Bar
Granola	Cauliflower	Prunes	Swiss Cheese	Eggs	Creamy Dressing
Blueberry Bagel	Sweet Potato	Nectarine		Canned Salmon	Cream Cheese
				Sausage	

Use the example provided above to organize the following foods into the appropriate food group categories:

Tomato	**Soda**	**Spinach**	**Candy Bar**	**Kool-Aid**	**Oatmeal**
Peanut Butter	**Pudding**	**Tortilla**	**Potato Chips**	**Cereal**	**Sweet Potato**
Kiwi	**Chocolate Milk**	**Zucchini**	**Corn**	**Raisins**	**Strawberries**
Yogurt	**Salmon**	**Cheddar Cheese**	**Black Beans**	**Toast**	**Mayonnaise**
Rice	**Mango**	**Grilled Chicken**	**Orange Juice**	**Eggs**	**Butter**

Grains	Vegetables	Fruits	Dairy	Protein Foods	Added Sugars &/or Saturated Fats

3. Nutritional goal setting can help you be at your best. Use this 6 step plan to help you reach your personal goals.

   Step 1: Set realistic goals-one that's right for you, not someone else.

   Step 2: Make a plan-Match your needs. Plan for small, step-by-step changes.

   Step 3: Prepare for challenges-Allow enough time for change to happen

   Step 4: Ask for help-Support others as they try to achieve their goals. Share your goal and plans with your family and ask for their help.

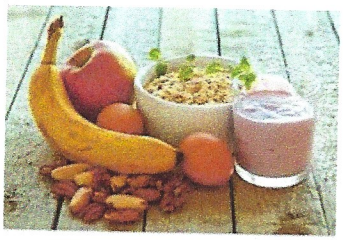
   Step 5: Give yourself a break-If you stray from your plan now and then.

   Step 6: Pat yourself on the back to celebrate your success!

Based on these 6 steps, set some nutritional goals for yourself:

Step 1: What's your goal?	
Step 2: How can you reach your goal(s)? When would you like to reach it?	
Step 3: What are your challenges?	
Step 4: Who can help you? How?	
Step 5: What if you stray from your plan? How will you get back on track?	
Step 6: How will you reward yourself?	

Day 2: Nutritional Breakfast



1. Eating a nutritional breakfast can help you build up your energy for the day. Answer the following questions about your own breakfast habits:

   a. Do you normally eat breakfast?

   b. Give a few reasons why you might skip breakfast.

   c. Describe how you physically feel when you DO NOT eat breakfast and compare it to how you feel when you DO eat breakfast?

   d. Name two things you could do to make more time for breakfast.

   e. Give three examples of a "grab and go" breakfast food.

   f. Name a breakfast that includes three or more food groups.

   g. Name two breakfast cereals. Which one do you think is healthier and why?

2. Look at the following examples of what other teenagers ate for breakfast and answer the questions that follow.

   a. Mandi is 15 years old and plays soccer at Palumbo Playground after school. She eats 2 cups of pre-sweetened corn flakes, a large banana, and 1 cup of whole milk for breakfast.

      What food groups did she eat?

      Are some food groups missing? Which ones?

      List key nutrients in her breakfast.

      Could her breakfast be improved? If yes, how?

   b. Jerome is 17 years old and always gets up late. He has a slice of left-over cheese pizza and a cup of coffee for breakfast as he runs to catch the bus.

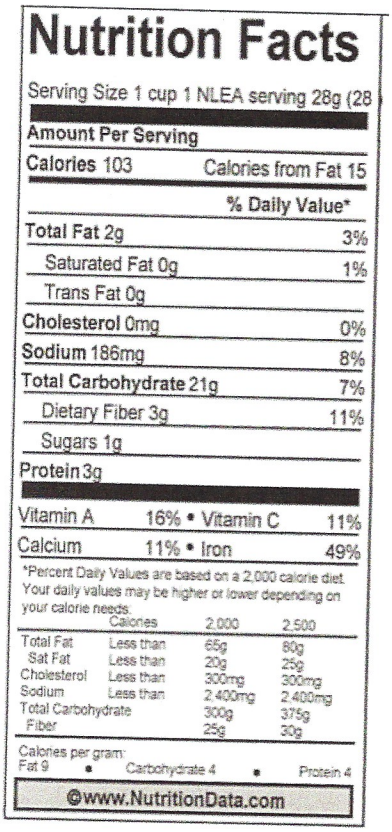
      What food groups did he eat?

      Are some food groups missing? Which ones?

      List key nutrients in his breakfast.

      Could his breakfast be improved? If yes, how?

3. Now that you have a good idea of what healthy breakfast looks like, let's compare two cereal labels to help us make smart choices:



Nutrition Facts

Serving Size 1 cup 1 NLEA serving 28g (28

Amount Per Serving

Calories 103	Calories from Fat 15
	% Daily Value*
Total Fat 2g	3%
Saturated Fat 0g	1%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 186mg	8%
Total Carbohydrate 21g	7%
Dietary Fiber 3g	11%
Sugars 1g	
Protein 3g	
Vitamin A 16% • Vitamin C	11%
Calcium 11% • Iron	49%

*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
Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

©www.NutritionData.com

Cereal Nutrition Label #1:

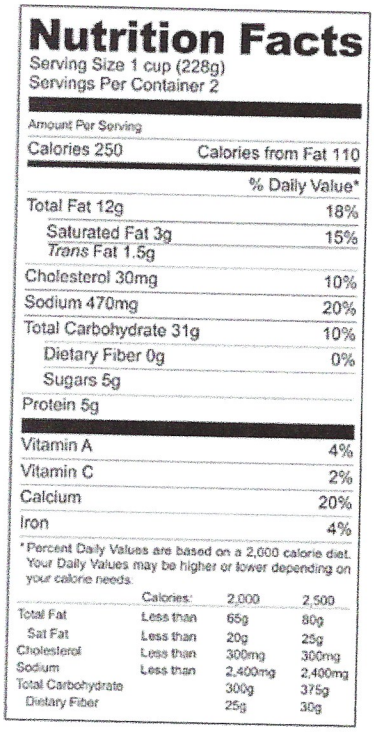
How many calories per serving?

How many grams of sugar per serving?

How many grams of total fat per serving?

How many grams of fiber per serving?

Is this cereal a healthy choice? Why or why not?



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 1.5g	
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

Cereal Nutrition Label #2:

How many calories per serving?

How many grams of sugar per serving?

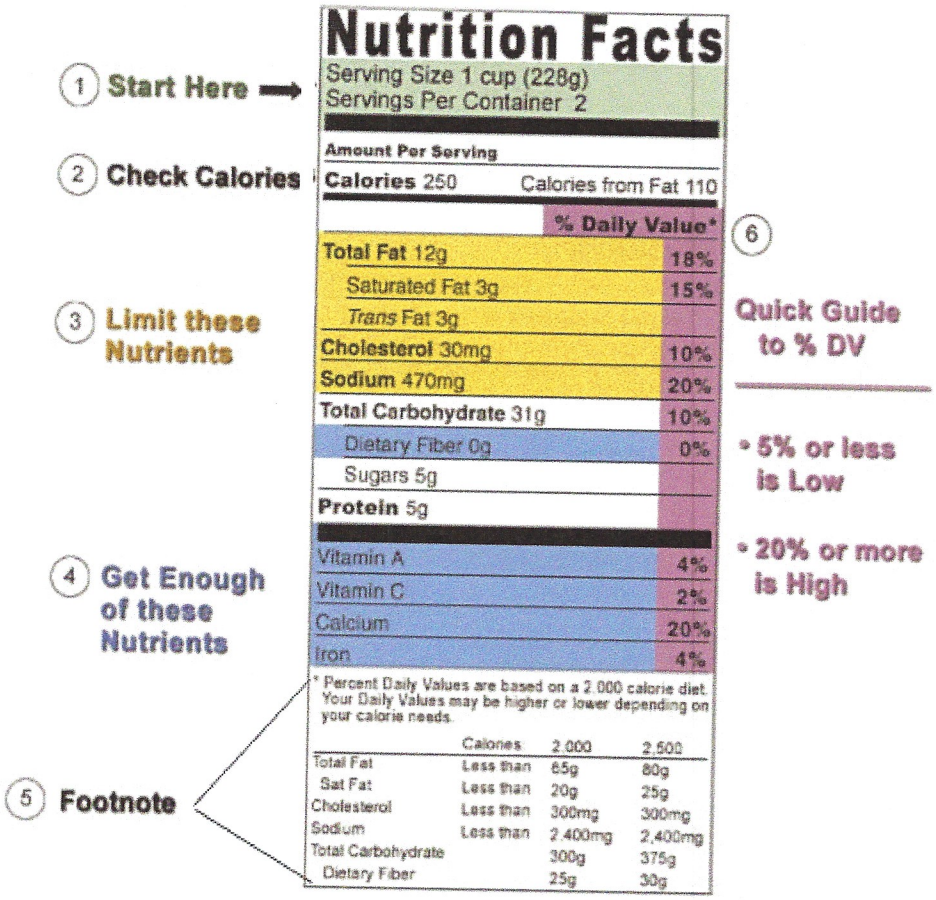
How many grams of total fat per serving?

How many grams of fiber per serving?

Is this cereal a healthy choice? Why or why not?

Day 3: Understanding Food Labels

1. Use the food label to answer the questions about nutrition:



a. What is the serving size for this food item?

b. How many servings are in the container?

c. What percentage is considered to be low?

d. What percentage is considered to be high?

e. What items on the label should have low percentages?

f. What items on the label should have high percentages?

2. Use the nutrition label from the first page to see where your calories are coming from:

FATS

- Step 1: Calories and grams of solid fat in one serving
  - Calories per serving: _____ calories
  - Grams of saturated fat in one serving: _____ grams
  - Grams of trans fat in one serving: _____ grams
  - Grams of solid fat in one serving = grams of saturated fat + trans fat

    = _____ grams
  - What type of solid fat is in the food?

    Trans, saturated, both, neither _____
- Step 2: Calories from Solid Fat
  - Calories from solid fat = grams of solid fat x 9

    = _____ x 9

    = _____
- Step 3: Percentage of Calories from Solid Fat
  - % of total calories from solid fat = calories from solid fat ÷ calories in 1 serving

    = _____ ÷ _____ x 100

    = _____ x 100

    = _____%
- Do you think you are getting too much solid fat from this food? Why or why not?

SUGARS

- Step 1: How many grams of sugar are in one serving? _____ grams
- Step 2: How many teaspoons of sugar are in one serving?
    - Teaspoons of sugar in 1 serving = grams of sugar ÷ 4 grams per teaspoon

      = _____ ÷ 4

      = _____
- Step 3: How many calories come from sugar?
    - Calories from sugar = grams of sugar x 4 calories per gram

      = _____ x 4

      = _____
- Do you think you are getting too much sugar from this food? Why or why not?

Day 4: Comparing Food Labels

1. All product nutrition labels identify a serving size-a standardized amount, such as cups or pieces, followed by the metric amount, such as number of grams.

6-ounce Bag of Potato Chips

Nutrition Facts

Serving Size 1oz. (28g/About 20 chips)
Servings Per Container 6

Amount Per Serving

Calories 190 Calories from Fat 90

Suppose you are snacking on this 6-ounce bag of regular salted potato chips. How much is one serving?

2. Many packages hold more than one serving. When you consume multiple servings, it is easy to eat or drink more than you realize. This can affect your calorie intake (and over time, your weight) in a big way.

24-ounce Bottle of Cola

Nutrition Facts

Serving Size 8 fl oz (240mL)
Servings Per Container 3

Amount Per Serving

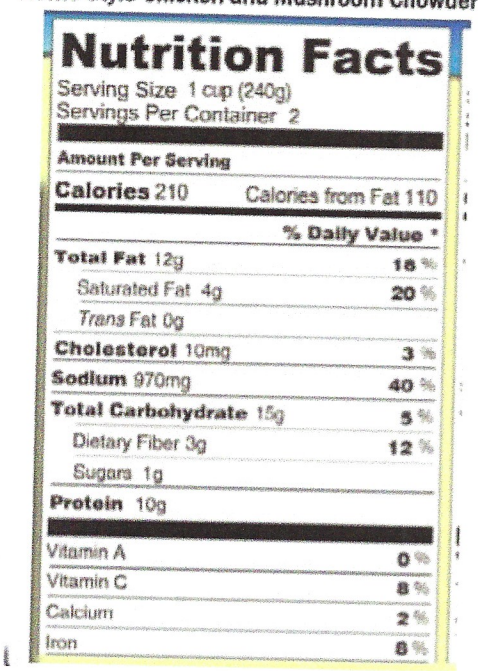
Calories 100 Calories from Fat 0

How many servings are in this 24-ounce bottle of soda?

If you drink the whole 24-ounce bottle of soda, how many calories would you drink?

3. When you compare or select food products, pay attention to the %DV's. Remember you need to limit some nutrients to get enough of others.

Home Style Chicken and Mushroom Chowder



Nutrition Facts

Serving Size 1 cup (240g)
Servings Per Container 2

Amount Per Serving	
Calories 210	Calories from Fat 110
	% Daily Value *
Total Fat 12g	18 %
Saturated Fat 4g	20 %
Trans Fat 0g	
Cholesterol 10mg	3 %
Sodium 970mg	40 %
Total Carbohydrate 15g	5 %
Dietary Fiber 3g	12 %
Sugars 1g	
Protein 10g	
Vitamin A	0 %
Vitamin C	8 %
Calcium	2 %
Iron	8 %

Quick Guide to Percent of Daily Values:
5% DV or less is LOW
20% DV or more is HIGH

a. What is the %DV for saturated fat in 1 cup of home style chicken and mushroom chowder soup?

b. Is this %DV for saturated fat high or low?

c. What is the % DV for sodium in 1 cup of home style chicken and mushroom chowder soup?

d. Is this % DV for sodium high or low?

e. How many calories would you consume if you ate 2 cups of soup?

4. Compare the two milk labels below to answer the questions that follow.

Low Fat Chocolate Milk

Nutrition Facts

Serving Size 8 fl oz (240mL)
Servings Per Container 8

Amount Per Serving	
Calories 160	Calories from Fat 25
	% Daily Value *
Total Fat 2.5g	4 %
Saturated Fat 1.5g	8 %
Trans Fat 0g	
Cholesterol 5mg	2 %
Sodium 150mg	6 %
Total Carbohydrate 26g	9 %
Dietary Fiber 1g	5 %
Sugars 26g	
Protein 8g	
Vitamin A	10 %
Vitamin C	4 %
Calcium	30 %
Iron	4 %

Fat Free Milk

Nutrition Facts

Serving Size 8 fl oz (240mL)
Servings Per Container 8

Amount Per Serving	
Calories 80	Calories from Fat 0
	% Daily Value *
Total Fat 0g	0 %
Saturated Fat 0g	0 %
Trans Fat 0g	
Cholesterol <5mg	0 %
Sodium 125mg	5 %
Total Carbohydrate 12g	4 %
Dietary Fiber 0g	0 %
Sugars 12g	
Protein 8g	
Vitamin A	10 %
Vitamin C	4 %
Calcium	30 %
Iron	0 %

How do the calories for one cup of fat free milk and low fat chocolate milk compare? ___

a. Low fat chocolate milk has less calories
b. Fat free milk has less calories
c. They have the same calories

How does the %DV of saturated fat for 1 cup of each compare? _____

a. Low fat chocolate milk is lower in saturated fat
b. Fat free milk is lower in saturated fat
c. They are both low in saturated fat

How does the %DV of calcium for 1 cup of each compare? _____

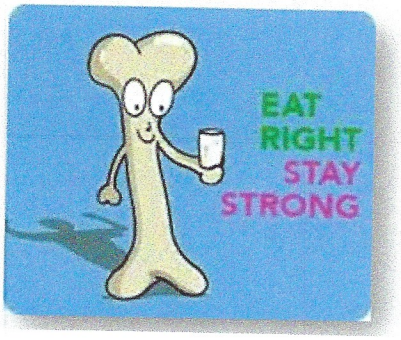
a. Low fat chocolate milk is higher in calcium
b. Fat free milk is higher in calcium
c. They are both high in calcium

Which product do you think is the smarter choice when considering calories, saturated fat, and calcium in a serving? Explain your answer.

Day 5: Calcium in Foods and Drinks

Why are Calcium and Vitamin D Important?

- Control Muscle Contractions
- Maintain and Build Strong Bones
- Prevent Osteoporosis and Bone Fractures



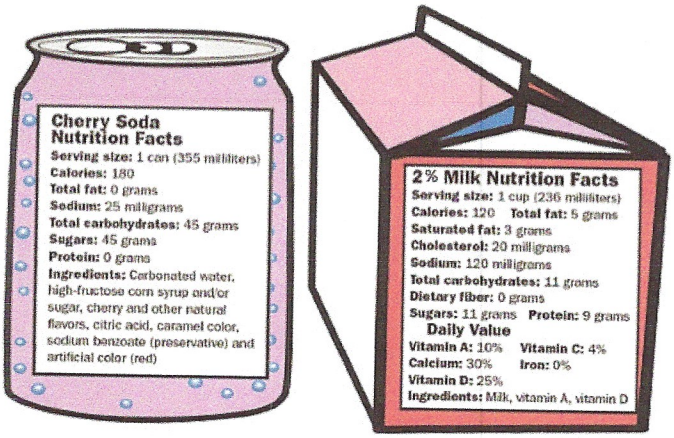
Building and Maintaining Bones:

- Bones are living organs
- Calcium deposited and withdrawn daily
- Bone mass begins to decline around 30 years of age
- Calcium in < Calcium Out =

Calcium can be found in a variety of foods and drinks:

Calcium in Drinks:

Use the following labels for Cherry Soda and 2% Milk to fill in the table.



	Cherry Soda	2% Milk
What is the serving size according to the label?		
How many total calories are there in one serving?		
How many grams of protein are in one serving of the beverage?		
How many grams of sugar are in one serving of the beverage?		
How many teaspoons of sugar are in one serving of the beverage? (Hint: 1 teaspoon = 4 grams of sugar)		
What ingredients may be contributing to the sugar content of the beverage?		
What vitamins and/or minerals are listed on the labels?		

Calcium in Foods:

The following table shows a list of calcium-rich foods.

Selected Food Sources of Calcium

Food	Calcium (mg)	% DV*
Yogurt, plain, low fat, 8 oz.	420	42%
Orange juice, calcium fortified, 8 fl. oz.	350	35%
Yogurt, fruit, low fat, 8 oz.	340	34%
Ricotta cheese, ½ cup	340	34%
Sardines, canned in oil, with bones, 3 oz.	320	32%
Cheddar cheese, 1 ½ oz.	300	30%
Milk, non-fat, 8 fl. oz.	300	30%
Milk, reduced fat (2% milk fat), no solids, 8 fl. oz.	300	30%
Milk, whole (3.25% milk fat), 8 fl. oz.	290	29%
Mozzarella, part skim 1 ½ oz.	275	27%
American cheese, 1.5 oz.	250	25%
Soy milk, calcium fortified, 8 fl. oz.	200	20%
Tofu, firm, made w/calcium sulfate, ½ cup***	200	20%
Salmon, pink, canned, solids with bone, 3 oz.	180	18%
Pudding, chocolate, instant, made w/ 2% milk, ½ cup	150	15%
Cottage cheese, 1% milk fat, 1 cup	140	14%
Tofu, soft, made w/calcium sulfate, ½ cup***	140	14%
Spinach, cooked, ½ cup	120	12%
Macaroni and cheese, box prepared, 1 cup	100	10%
Frozen yogurt, vanilla, soft serve, ½ cup	100	10%
Ready to eat cereal, calcium fortified, 1 cup	100-1000	10-100%
Turnip greens, boiled, ½ cup	100	10%
Kale, cooked, 1 cup	90	9%
Ice cream, vanilla, ½ cup	85	8.5%
Baked beans, 1/3 cup	50	5%
Broccoli, cooked ½ cup	50	5%
Tortilla, corn, ready to bake/fry, 1 medium	40	4%
Cream Cheese: 1 ½ oz. (3 Tbsp)	30	3%
Bread, white, 1 oz.	30	3%
Orange juice, 8 oz. (1 cup)	25	2.5%
Orange juice, 8 oz. (1 cup)	20	2%
Soda, 1 cup	0	0%

*DV=Daily Value; **Content varies slightly according to fat content; average =300 mg calcium; *** Not all tofu contains calcium. Read the Nutrition Facts label.

Use the table from page 3 to write down all of the foods containing calcium that you eat on a typical day. Then fill in the amount of calcium that each food provides and find the totals.

Food	***Calcium (mg)***	***Calcium (%DV)***
Breakfast		
Lunch		
Dinner		
Snacks		
TOTAL:		

Teenagers need 1300mg or 130%DV of calcium daily.

Are you getting enough calcium? _____

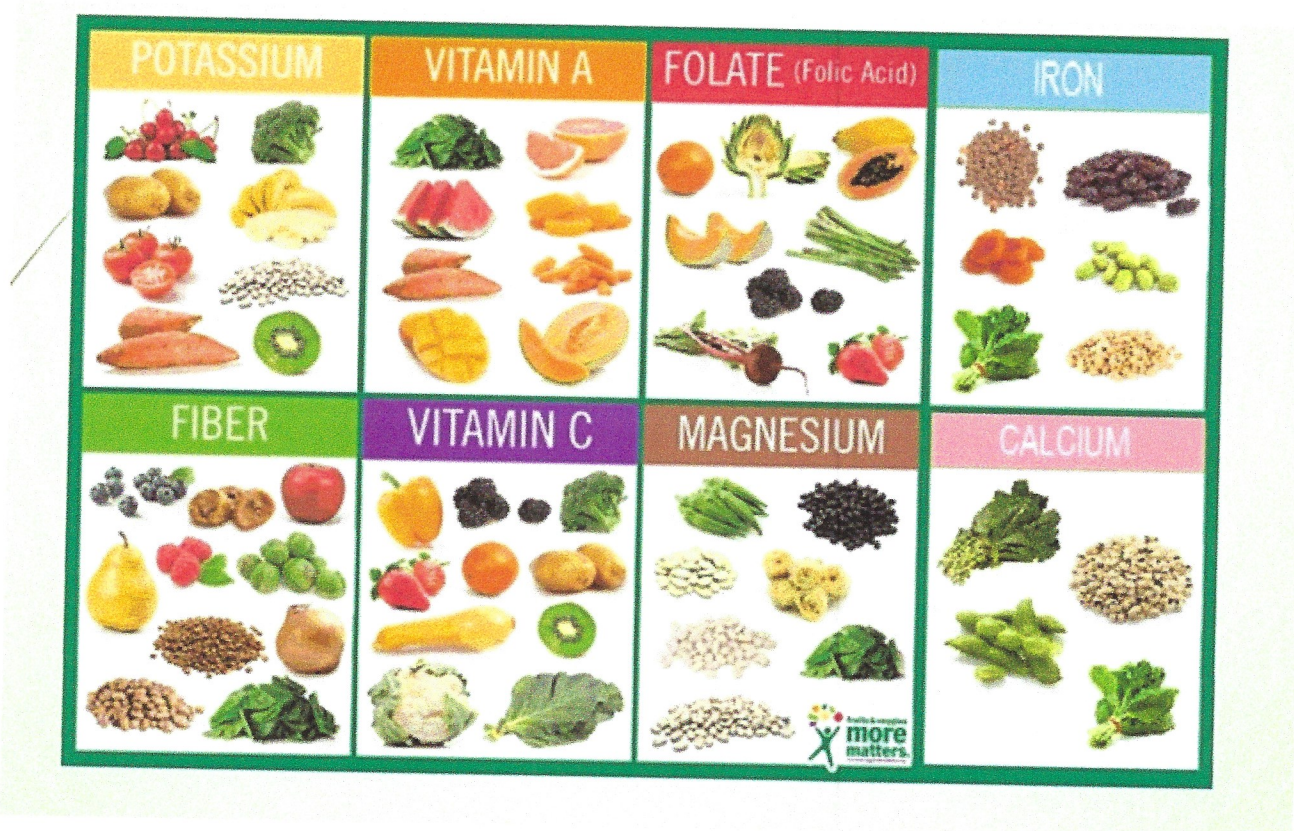
Getting enough calcium can help prevent what disease? _____

Day 6: Fruits and Vegetables

Benefits of eating a diet rich in vegetables and fruits:

- Reduce risk for heart disease
- Protect against certain types of cancers
- Reduce risk of obesity and Type 2 diabetes
- Lower blood pressure
- Reduce the risk of developing kidney stones
- Decrease bone loss
- Lower calorie intake

Minerals and Nutrients from Fruits and Vegetables:



1. List three easy and convenient snacks that contain fruits and vegetables?

   (1)

   (2)

   (3)

2. Why do you think it is important to eat fruits and vegetables from all of the color groups?

3. Think of as many fruits and vegetables as you can. Categorize them by color in the table below:

Blue and Purple	***Green***	***White***	***Yellow and Orange***	***Red***

4. Suppose oranges cost $1.25 per pound and there are roughly 4 oranges in a pound. One orange contains 60 milligrams of vitamin C.

   a. If you have $8.75, how many pounds of oranges could you purchase?

   b. If you bought the pounds of oranges from part a, how many individual oranges would you have?

   c. If you ate all of the oranges bought from part a, how many milligrams of vitamin C would you consume?

5. Ulster County offers a growing number of farmer's markets, fruit stands, and healthy fruit and vegetable options at grocery stores. Where does your family get their fresh produce from?

Day 7: Portion Sizes & Fiber

Portion Sizes:

- Eating the correct amount of food is an important part of staying healthy
- Large portions and too many extras can increase calories
- Share a meal with a friend or save half for later

Use the chart of portions from page 1 to provide an example of the following:

- 1 ounce of grains:
- 1 cup of vegetables:
- ½ cup of fruits:
- 1 cup of dairy:
- 2 ounces of protein:

Read the following situations and come up with a strategy to fight the portion distortion.

(1) An after school club is trying to raise money. They are thinking of sponsoring a pie eating contest.

(2) You are invited to a spaghetti dinner. The person serving the food starts handing you a plate that is piled high with spaghetti.

(3) You have a choice of going to an all-you-can-eat buffet or at a regular restaurant. When you go to the all-you-can-eat buffet, you feel stuffed when you leave.

(4) A group of students has requested that a community center near the school install vending machines that sell 20-ounce bottles of soda.

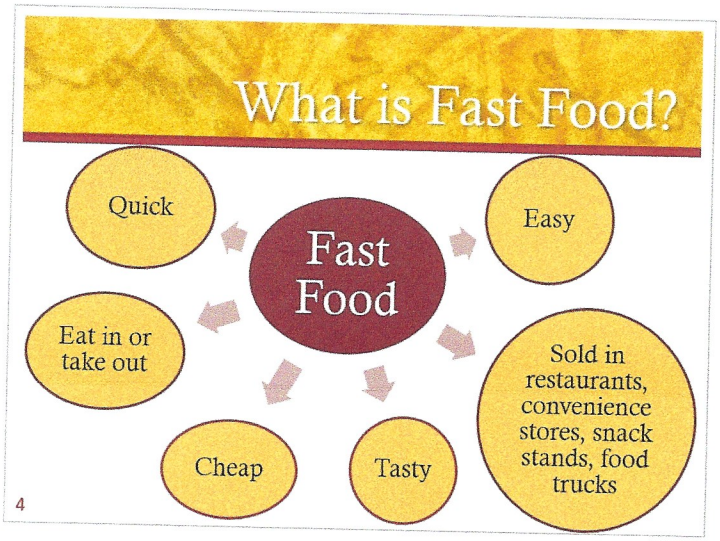
Fiber in Your Diet:

- keeps your digestive system healthy
- can help lower blood pressure
- can reduce the risk of heart disease and diabetes
- Recommendations:
  - Males: 38 grams per day
  - Females: 25 grams per day
  - If you are not consuming a lot of fiber in your diet, start slowly when adding fiber (add 5 additional grams per week)

Look at the table below: Put a check in the 4th column for foods you already eat on a regular basis. Place a check in the last column for foods you would be willing to eat.

Food Item	***Serving***	***Grams of Fiber per serving***	***Foods I eat now***	***Foods I can add to my diet***
Bran cereal (high fiber)	½ cup	13		
Black or pinto beans	½ cup	8		
Raisin bran cereal	1 cup	8		
Mini-shredded wheat cereal	24 biscuits	6		
Corn on the cob	1 medium ear	5		
Oatmeal	1 cup	4		
Apple (with skin)	1 medium	4		
Peas	½ cup	4		
Banana	1 medium	3		
Peanuts	¼ cup	3		
Popcorn	3 cups	3		
Brown rice or wild rice	1 cup	3		
Spaghetti or other pasta	1 cup	2		

Day 8: Fast Food



Fast Food Facts:

- The average American eats out:
  - 4-5 times per week
  - 18.2 times per month
  - 218 times per year

- Americans are spending more on eating out than on groceries

Reasons People Eat Fast Food:

- Time
- Convenience
- Taste
- Price
- Too busy to cook
- It's a treat
- Socialization
- Fun

Fast Food often contains a lot of…

- Saturated and Trans Fat
  - Can increase cholesterol levels
  - Can increase risk of heart disease
- Calories
  - Can lead to weight gain
  - Can increase risk of heart disease, diabetes, stroke, and some cancers
- Sodium
  - Can increase risk of high blood pressure
- Added sugars
  - Can lead to higher calories and weight gain

The following table shows the nutritional information for select items at McDonald's.

McDonald's®

Food Item	Calories	Fat (g)	Sat Fat (g)	Trans Fat (g)	Chol (mg)	Sodium (mg)	Carbs (g)	Fiber (g)
Bacon, Egg & Cheese Biscuit	420	23	12	0	235	1160	37	2
Egg McMuffin®	300	12	5	0	260	820	30	2
McGriddles®, bacon, egg & cheese	420	18	8	0	240	1110	48	2
Big Mac®	540	29	10	1.5	75	1040	45	3
Cheeseburger	300	12	6	0.5	40	750	33	2
Hamburger	250	9	3.5	0.5	25	520	31	2
McChicken®	360	16	3	0	35	830	40	2
Chicken McNuggets®, 4	190	12	2	0	25	360	12	1
Chicken McNuggets®, 10	470	30	5	0	65	900	30	2
French Fries, small	230	11	1.5	0	0	160	29	3
French Fries, large	500	25	3.5	0	0	350	63	6
Baked Hot Apple Pie	250	13	7	0	0	170	32	4
Fruit 'n Yogurt Parfait	160	2	1	0	5	85	31	1
McFlurry®, Oreo®, 12 oz.	580	19	10	1	50	320	89	3

1. Choose 3 items that you would typically order from the McDonalds menu. Record the calories and fat from these 3 items and find the totals.

McDonald's Menu Item	***Calories***	***Grams of Fat***
(1)		
(2)		
(3)		
Totals:		

2. Now try to makeover your meal by choosing 3 healthier items from the same menu that add up to less than 600 calories and less than 25 grams of total fat.

McDonald's Menu Item	***Calories***	***Grams of Fat***
(1)		
(2)		
(3)		
Totals:		

The following table shows the nutritional information for select items at Kentucky Fried Chicken:

KFC®

Food Item	Calories	Fat (g)	Sat Fat (g)	Trans Fat (g)	Chol (mg)	Sodium (mg)	Carbs (g)	Fiber (g)
Biscuit	180	8	6	0	0	530	23	1
Cole Slaw	180	10	1.5	0	5	150	20	2
Extra Crispy™ Chicken Breast	510	33	7	0	110	1010	16	0
Extra Crispy™ Chicken Drumstick	150	10	2	0	55	360	5	0
Grilled Chicken Breast	210	8	2.5	0	105	460	0	0
Grilled Chicken Drumstick	80	4	1	0	55	230	0	0
KFC Snacker® w/ Crispy Strip	290	11	2.5	0	30	730	33	3
Macaroni and Cheese	160	7	2.5	0	5	720	19	1
Mashed Potatoes w/ gravy	120	4	1	0	0	530	19	1
Original Recipe™ Chicken Breast	360	21	5	0	110	1080	11	0
Original Recipe™ Chicken Drum-	120	7	1.5	0	45	310	3	0
Popcorn Chicken, individual	400	26	6	0	45	1040	18	1
Potato Salad	210	11	2.5	0	10	560	26	3
Potato Wedges	310	18	3	0	0	870	32	4

3. Choose 3 items that you would typically order from the KFC menu. Record the calories and fat from these 3 items and find the totals.

KFC Menu Item	***Calories***	***Grams of Fat***
(1)		
(2)		
(3)		
Totals:		

4. Now try to makeover your meal by choosing 3 healthier items from the same menu that add up to less than 600 calories and less than 25 grams of total fat.

KFC Menu Item	***Calories***	***Grams of Fat***
(1)		
(2)		
(3)		
Totals:		

5. What 3 fast food restaurants do you typically get food from?

6. How many times a week do you typically eat fast food?

7. Has COVID-19 influenced how often you eat fast food? Explain.

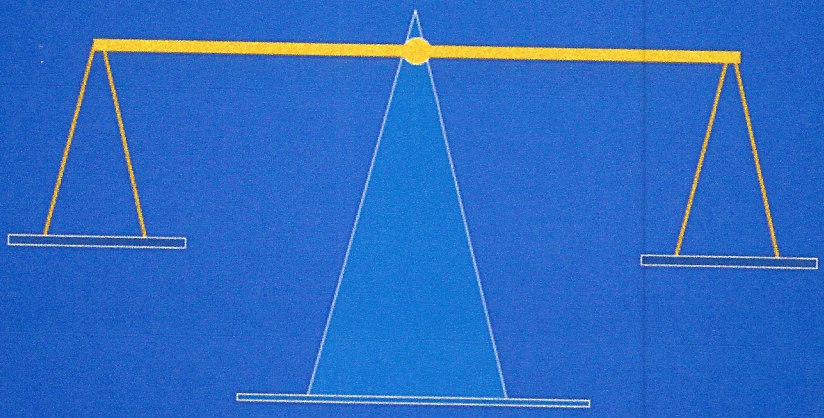
8. Are fast food restaurants dispersed evenly throughout your community or do they cluster in specific areas? Why do you think that's the case?

9. Do you think the number of fast food restaurants in your community is higher or lower than what you would find in other communities? Why?

10. Name 3 ways you can make healthier food choices when eating at fast food restaurants.

Day 9: Physical Activity

ENERGY BALANCE

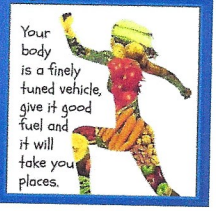


ENERGY IN
Food
Beverage

ENERGY OUT
Basal Metabolism
Physical Activity
Thermic Effect of Food

ENERGY IN

- Food and Beverages = Fuel for the body
- Calories – measure of food energy
- Nutrients that provide energy
  - Carbohydrates
  - Protein
  - Fat



ENERGY OUT

- Basal Metabolism
  – Energy the body uses to maintain life
- Physical Activity
  – Energy used to move
- Thermic Effect of Food
  – Energy needed to process food

Activity Levels:

- ***Sedentary***:
  - Doing only the light physical activity associated with day-to-day life such as taking a shower, getting dressed, and taking the bus to school
  - Example: someone who sits most of the day doing activities such as riding in a bus or car, watching TV, playing video games, or using a computer

- ***Moderately Active***:
  - Doing physical activity equivalent to walking 1.5 to 3 miles a day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life
  - Example: Someone who bikes for half an hour a day but doesn't break a sweat

- ***Active***:
  - Doing physical activity equivalent to walking more than 3 miles a day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life
  - Example: someone on a basketball team

Which activity level best fits your lifestyle: _____

Calorie Needs based on Gender and Activity Level

		Activity Level		
Gender	**Age**	**Sedentary**	**Moderately Active**	**Active**
Female	14-18	1800	2000	2400
Male	14-18	2000-2400	2400-2800	2800-3200

Based on this chart, what would be your daily calorie needs? _____

*If you are male, use the lower end of the range if you are younger & use the upper end of the range if you are older.

Personal Activity Goals:

Do you typically get at least 60 minutes of physical activity every day? _____

The following 3 ways can help you become more physically active. Use the examples to set goals for yourself.

1. ***Trade physically inactive time for physically active time***

   Example: I could ride my bike instead of watching TV after completing my homework

   I could _____

   Instead of _____

   When? _____

2. ***Add new physical activities***

   Example: I could walk to the store instead of driving in a car

   I could _____

   Instead of _____

   When? _____

3. ***Do more of what you are already doing***

   Example: I could play basketball for 30 minutes a day instead of 20 minutes Monday through Friday

   I could _____

   Instead of _____

   When? _____

Day 10: Exercise

Why is Physical Activity Important?

- Increase your chances of living longer
- Feel better about yourself
- Decrease risk of depression
- Better sleep
- Concentrate better in school
- Move around more easily
- Have stronger muscles and bones
- Maintain or achieve a healthy weight
- Be with friends or meet new people
- Enjoy yourself and have fun

Physical Activity and Your Health

A lack of physical activity increases the risk of:

- Heart disease
- Diabetes
- Hypertension
- High blood cholesterol
- Stroke

Types of Physical Activity

Aerobic

- Makes you breathe harder and your heart beat faster
- Running, jumping rope, swimming, dancing, biking

Muscle-strengthening

- Making muscles work more than usual
- Climbing, tug-of-war, lifting weights, push-ups

Bone-strengthening

- Moving our bones against the force of gravity
- Running, jumping rope, basketball, tennis, weight-lifting

Balance and Stretching

- Improves stability and flexibility
- Reduces risk of injuries
- Gentle stretching, dancing, yoga, martial arts, and t'ai chi

The following link provides an exercise calculator that shows how many calories you burn doing different exercises:

https://www.webmd.com/fitness-exercise/healthtool-exercise-calculator

In the online calculator, you will need to include...

- the type of exercise (you can use the sample exercises provided or search your own)
- your current weight (in pounds)
- how long you did the activity (in minutes and/or hours)

Choose 5 different activities and calculate how many calories you would burn doing that exercise. Record your work in the table below.

Type of Exercise	***Duration of Exercise***	***Calories Burned***
Example: Kickboxing	30 minutes	295 calories
1.		
2.		
3.		
4.		
5.		

Calculate the total calories you would burn if you did these 5 activities this week: _____

Day 11: Ideal Weight

Many people want to know "How Much Should I Weigh?" but there is not one ideal healthy weight for each person. There are a number of different factors that play a role in the answer: age, muscle fat ratio, height, gender, and body shape.

Having excess weight can affect a person's risk of developing a number of health conditions: obesity, type 2 diabetes, high blood pressure, and cardiovascular problems. Doctors use 4 ways to determine ideal weight: body mass index, waist-to-hip ratio, waist-to-height ratio, body fat percentage

1. *Body Mass Index (BMI)*

- Common tool for deciding whether a person has an appropriate body weight relative to their height
- ***Underweight***: BMI less than 18.5
- ***Ideal:*** BMI between 18.5 and 24.9
- ***Overweight:*** BMI between 25 and 29.9
- ***Obese***: BMI over 30
- This calculation is a good starting point for doctors but does not take other factors into account (for example, high performance athletes may have a high BMI but they have more muscle mass--they are not overweight)

- Use the link for the following BMI calculator to fill in the table of sample BMI calculations: https://www.medicalnewstoday.com/articles/323586

Sample Name	*Height*	*Weight*	*BMI*	*BMI classification*
Abigail	5 feet 10 inches	120 pounds		
Bob	6 feet	230 pounds		
Cindy	5 feet 4 inches	150 pounds		
David	6 feet 2 inches	190 pounds		

- Use the same online calculator to determine your BMI. This is for your personal knowledge. You do not need to record your information.

2. ***Waist-to-Hip Ratio (WHR)***

- Compared a person's waist size with that of their hips
- People with more body fat around their middle are more likely to develop cardiovascular disease and diabetes
- WHR for males:
  - WHR below 0.9: risk for cardiovascular health problems is low
  - WHR between 0.9 and 0.99: risk is moderate
  - WHR at 1.0 or over: risk is high
- WHR for females:
  - WHR below 0.8: risk for cardiovascular health problems is low
  - WHR between 0.8 and 0.89: risk is moderate
  - WHR at 0.9 or over: risk is high
- To find the waist-to-hip ratio:
  - Measure around the waist in the narrowest part (usually above the belly button)
  - Measure around the hip at the widest part
  - Divide the first measurement (waist) by the second measurement (hip)

- Use the calculation instructions above and the provided example to complete the waist-to-hip ratio table below:

Sample Name	***Waist size (in inches)***	***Hip size (in inches)***	***Waist-to-Hip Ratio: Waist size ÷ hip size***	***Risk for cardiovascular health problems***
Example: Eleanor (female)	28	36	28/36 = 0.77	Low
Frank (male)	38	37		
Garry (male)	34	38		
Ivy (female)	30	34		

3. ***Waist-to-Height Ratio (WtHR)***

- Another tool that can help predict the risk of heart disease and diabetes
- To find the waist-to-height ratio:
  - Measure around the waist (in inches) in the narrowest part (usually above the belly button)
  - Measure the height (in inches)
  - Divide the first measurement (waist) by the second measurement (height)
- If the WtHR is 0.5 or less, the risk of health problems is significantly lower
- Use the calculation instructions above and the provided example to complete the waist-to-height ratio table below:

Sample Name	***Waist size (in inches)***	***Height (in inches)***	***Waist-to-Height Ratio: Waist size ÷ height***	***Risk for cardiovascular health problems***
Example: Jocelyn (female)	34	5 feet 4 inches = 64 inches	34/64 = 0.53	Yes
Kyle (male)	35	72		
Lorri (female)	30	63		
Manny (male)	40	68		

4. ***Body Fat Percentage***

- Total fat includes essential and storage fat
    - Essential fat: the fat a person needs to survive (2-4% of body fat for men and 10-13% for women)
    - Storage fat: fatty tissue that protects the internal organs in the chest and abdomen that can be used for energy if necessary
- Body fat percentage can be found by taking the weight of a person's fat divided by their total weight
- To find body fat percentages, most doctors use a skinfold measurement where calipers pinch the skin to measure tissue on the thigh, abdomen, chest and/or upper arm
- Look at the tables below as a guide to ideal body fat percentages based on age and fitness level
- There are no questions to answer in this section, but you should understand that this is another measure of ideal body weight

Male

	Age (years)				
Fitness category	20–29	30–39	40–49	50–59	60+
Essential fat	2–5	2–5	2–5	2–5	2–5
Excellent	7.1–9.3	11.3–13.8	13.6–16.2	15.3–17.8	15.3–18.3
Good	9.4–14	13.9–17.4	16.3–19.5	17.9–21.2	18.4–21.9
Average	14.1–17.5	17.5–20.4	19.6–22.4	21.3–24	22–25
Below average	17.4–22.5	20.5–24.1	22.5–26	24.1–27.4	25–28.4
Poor	>22.4	>24.2	>26.1	>27.5	>28.5

Female

	Age (years)				
Fitness category	20–29	30–39	40–49	50–59	60+
Essential fat	10–13	10–13	10–13	10–13	10–13
Excellent	14.5–17	15.5–17.9	18.5–21.2	21.6–24.9	21.1–25
Good	17.1–20.5	18–21.5	21.3–24.8	25–28.4	25.1–29.2
Average	20.6–23.6	21.6–24.8	24.9–28	28.5–31.5	29.3–32.4
Below average	23.7–27.6	24.9–29.2	28.1–32	31.6–35.5	32.5–36.5
Poor	>27.7	>29.3	>32.1	>35.6	>36.6