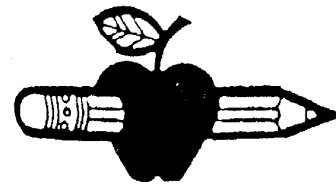


COUNTRY

to



Classroom



GDNUOR EEFB
EEHSC

MOTTOA

WHAT'S TO EAT?

PTUCKEH

UNB

INNOO

TUETELC

KPCIELS

DRAMUTS



Can you identify the parts of this cheeseburger? Unscramble the words above to help you. Did you know that a cheeseburger has products from all the food groups?



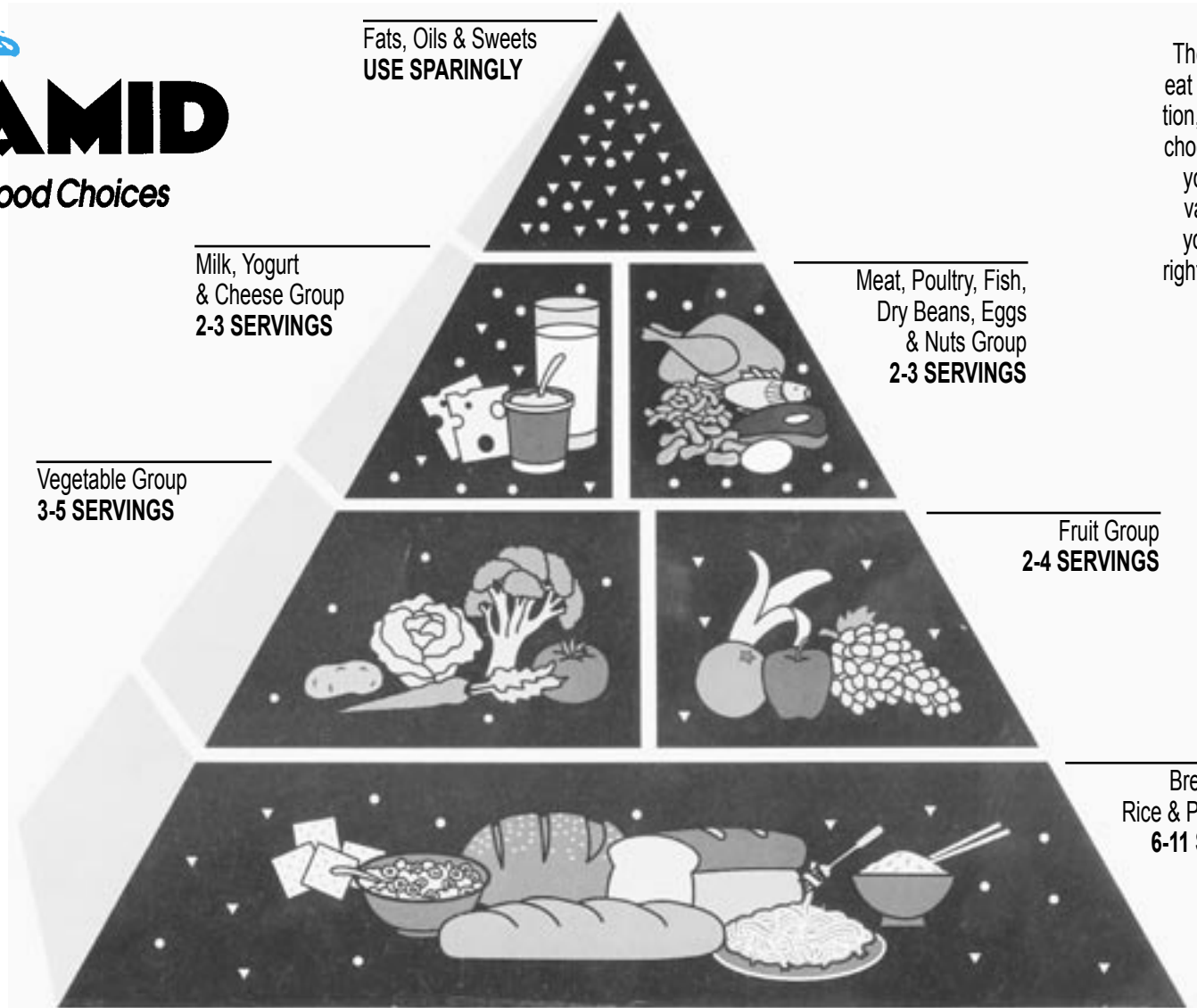
I'm so hungry:
What's to eat?

PYRAMID

A Guide to Daily Food Choices

The Food Guide Pyramid emphasizes foods from the five food groups shown in the three lower sections of the Pyramid.

Each of these food groups provides some, but not all, of the nutrients you need. Foods in one group can't replace those in another. No one food group is more important than another – for good health, you need them all.



The Pyramid is an outline of what to eat each day. It's not a rigid prescription, but a general guide that lets you choose a healthful diet that's right for you. The Pyramid calls for eating a variety of foods to get the nutrients you need and at the same time the right amount of calories to maintain a healthy weight

Think of the FOOD GUIDE PYRAMID and its food groups as your body's best friend. Together, these food groups supply you with what you need to grow. Are you eating from all of the food groups? Fill out the following to find out and then compare your answers with the above Food Guide Pyramid.

- 1. Be a Body Builder!**
Protein is the main nutrient your body uses to help you grow, rebuild cells and build muscles. The foods in the *Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group* are your best sources of protein. So how many servings did you eat from this group yesterday?
- 2. No Bones (or teeth) About It!**
Your body uses calcium to build bones and teeth. Calcium is found mainly in the *Milk, Yogurt & Cheese Group*. How many servings did you feed your 206 bones and 25+ teeth yesterday?
- 3. Oh, Say Can You See?**
The *Vegetable Group* is a major source of Vitamin A. Your eyes need Vitamin A to see in the dark. Get the "eye" dea? So, how many servings of vegetable did you eat yesterday?
- 4. The Skinny on Skin**
Skin is the only organ that's outside the body, so it gets bumped a lot. Vitamin C, which you get from fruit helps heal cuts and bruises. So how many serving from the *Fruit Group* did you have yesterday?
- 5. Want to be a Mover and a Shaker?**
Then you need carbohydrates, your body's main energy source. *Bread, Cereal, Rice, & Pasta* is the food group for carbohydrates. How many servings did you eat yesterday?

Wondering what to have for lunch? Nothing looks good in the fridge after school? How many times do we ask our parents "What's to eat?" Chances are that you think about food a lot. But just because you love to eat doesn't mean you are eating smart.

Have you ever wonder "Why can't we just eat all bread or all potatoes or all cotton candy?" The answer: human beings need variety. It takes many different foods to supply our bodies with all the nutrients we need to grow and function.

In this issue, we are going to learn more about eating smart and what we need to grow to be healthy adults, so lets get started.

What's the Shape of Your Diet?

Do you know what's the shape of your diet? The Food Guide Pyramid was developed to help Americans determine the proportion of foods to eat for a balanced, healthy diet. The pyramid identifies five food groups and suggested range of the number of servings for each food group. The number of serving suggested depends on the number of calories needed. And the number of calories needed depends on age, gender, size, and activity level. But don't worry, the average American diet is generally unbalanced when compared with the suggested serving from the Food Guide Pyramid. The newest Dietary Guideline for Americans suggest that we do the following:

1. Eat a variety of foods.
2. Balance the food you eat with physical activity.
3. Choose a diet with plenty of grain products, vegetables and fruits.
4. Choose a diet low in fat and cholesterol
5. Choose a diet moderate in sugars.
6. Choose a diet moderate in salt and sodium.

WHAT FOOD GROUP AM I?

By looking at the Food Guide Pyramid, can you identify what food groups are listed in

Clue 1

Sometimes you eat me, sometimes you drink me. I am naturally low in fat and I provide fiber. I am most important for providing vitamin C, which helps your body heal and grow new cells. I am the edible fleshy part of the plant that surrounds the seeds. Sometimes you have to peel me before you can eat me.

What Food Group Am I?



Clue 2

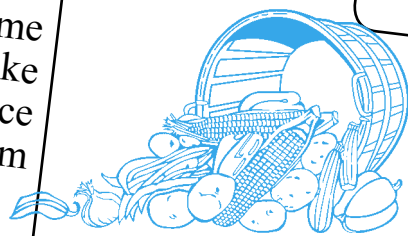
Some of my foods provide fat, but I am more important for providing protein to help build strong muscles and to repair and build new body tissue. I help keep your skin, hair, and nails healthy too. I am the only food group that has foods from both plants and animals.

What Food Group Am I?

Clue 3

Most of my foods are high in sugar or fat. Some of my foods add flavor to other foods and make them taste good. I can be a healthy food choice as long as you don't eat too much of me. I am not a food group.

What Am I?



Clue 4

Sometimes you eat me, sometimes you drink me. I am naturally low in fat and I provide fiber. I am most important for providing vitamin A, which helps keep your skin and eyes healthy. I am seldom eaten for breakfast.

What Food Group Am I?



Clue 5

Sometimes you eat me, sometimes you drink me. I provide some fat, but I am most important for providing calcium, which helps your bones grow and become strong. I come mainly from cows.

What Food Group Am I?



Clue 6

A lot of people like me because I am naturally low in fat. I am important for providing the B vitamins so your blood, skin, and nervous system are healthy. I also provide carbohydrates which give you a long lasting source of energy. That is why athletes often eat a lot of me before a competition or major physical activity.

What Food Group Am I?

Answers: Clue 1 - Fruit; Clue 2 - Meat; Clue 3 - Fats, Oil, Sweets; Clue 4 - Vegetable; Clue 5 - Milk; Clue 6 - Bread

Decode the following messages using the information below. On the line above each number, write in the corresponding letter. For example, the number 3 corresponds to the letter E, so above all 3's write in E. By filling in all the lines you will reveal the four benefits to choosing food for good health.

① 4 3 3 7 2 3 13 13 3 11

② 5 11 10 15 2 3 13 13 3 11

③ 2 3 12 13 11 10 9 5 3 11

④ 6 1 14 3 8 10 11 3 3 9 3 11 5

16

A = 1	G = 5	N = 9
T = 13	B = 2	H = 6
O = 10	V = 14	E = 3
L = 7	R = 11	W = 15
F = 4	M = 8	S = 12
Y = 16		

Answers: 1 - feel better; 2 - grow better; 3 - be stronger; 4 - have more energy.

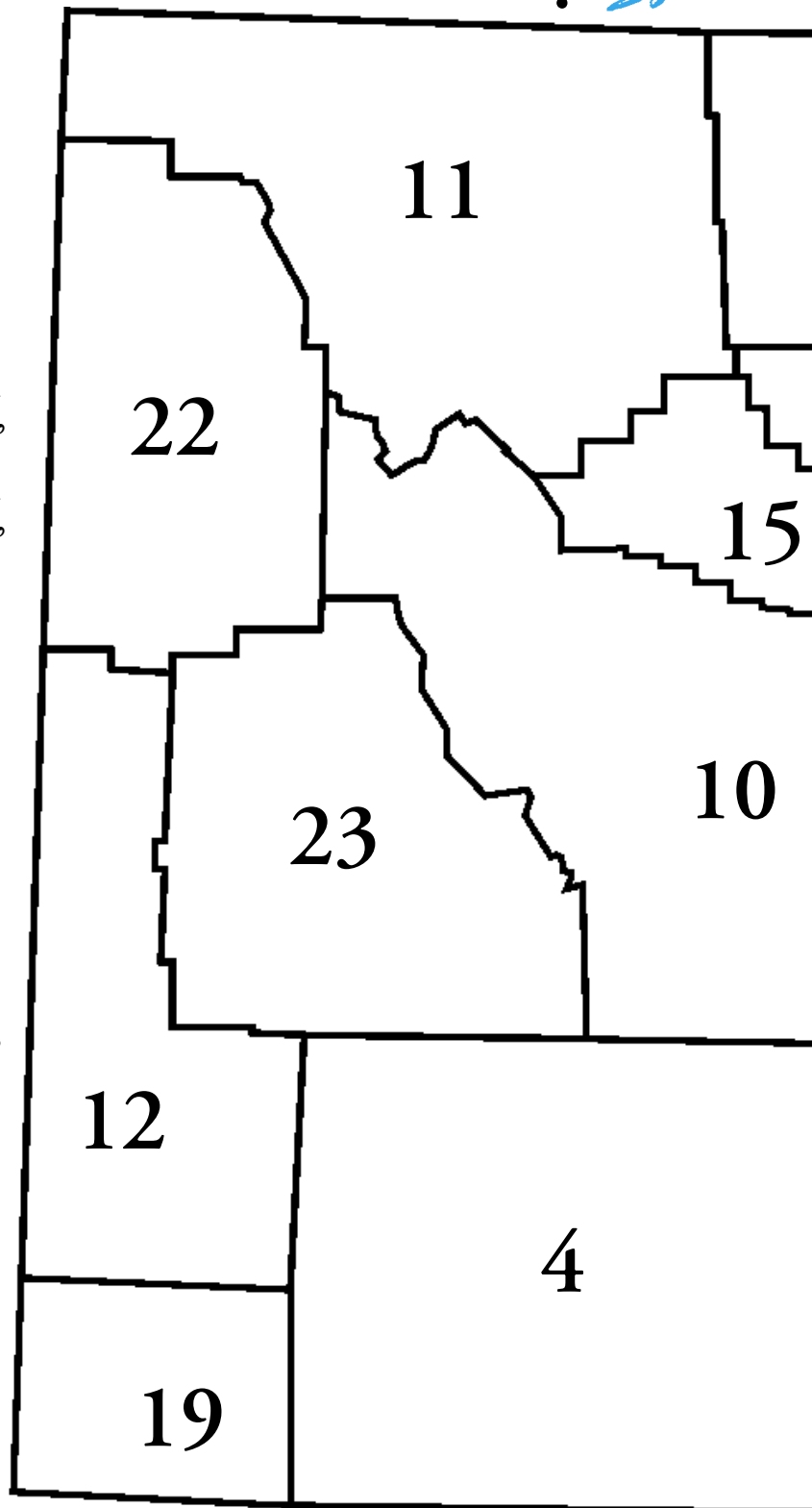
JUST WHAT IS PRODUCED IN WYOMING?

Find out what the farmers and ranchers in Wyoming raise. You'll notice that the map below is of Wyoming and it is divided into 23 counties in Wyoming. The number of the county on the map goes along with the number listing below.



1. Write the county name on the line next to the correct number. You will need to use a map of Wyoming to help you.

1. _____ BEEF, HAY, OATS, SHEEP, WHEAT, BARLEY
2. _____ WHEAT, POTATOES, HAY, BEEF, SHEEP, BEANS, CORN, OATS, BARLEY, HOGS, DAIRY, SUGAR BEETS.
3. _____ BEEF, HAY, BARLEY, OATS, WHEAT, SHEEP, DAIRY
4. _____ SHEEP, BEEF, HAY, OATS
5. _____ BEEF, HAY, SHEEP
6. _____ SHEEP, BEEF, HAY, OATS, WHEAT
7. _____ BEEF, SUGAR, BEETS, BARLEY, HAY, CORN, WHEAT, OATS, BEANS, HOGS
8. _____ BEEF, SUGAR, BEETS, BARLEY, HAY, CORN, WHEAT, OATS, BEANS, HOGS, DAIRY
9. _____ BARLEY, OATS, CORN, HAY, BEANS, SUGAR, BEETS, BEEF, SHEEP, HOGS, DAIRY WHEAT
10. _____ BEANS, BEEF, SHEEP, BARLEY, HAY, CORN, OATS, HOGS, SUGAR, BEETS, DAIRY
11. _____ BEEF, BEANS, OATS, CORN, SUGAR, BEETS, BARLEY, HAY, HOGS, SHEEP, DAIRY, WHEAT
12. _____ DAIRY, HAY, SHEEP, OATS, BARLEY, BEEF, HOGS
13. _____ SHEEP, BEEF, HAY, OATS, WHEAT, BARLEY
14. _____ BEEF, HAY, WHEAT, BARLEY, OATS, SHEEP
15. _____ BEEF, HAY, OATS, BARLEY
16. _____ SHEEP, BEEF, HAY, OATS, BARLEY
17. _____ WHEAT, HAY, BEEF, SHEEP, BARLEY, OATS
18. _____ OATS, BEEF, HAY, WHEAT, SHEEP, DAIRY, HOGS, BARLEY
19. _____ BEEF, SHEEP, HAY, DAIRY
20. _____ SHEEP, BARLEY, OATS, SUGAR, BEETS, CORN, BEEF, HAY, BEANS
21. _____ OATS, BEEF, HAY, SHEEP, WHEAT
22. _____ BEEF, HAY, BARLEY
23. _____ HAY, BEEF, OATS



What is produced in your county? _____

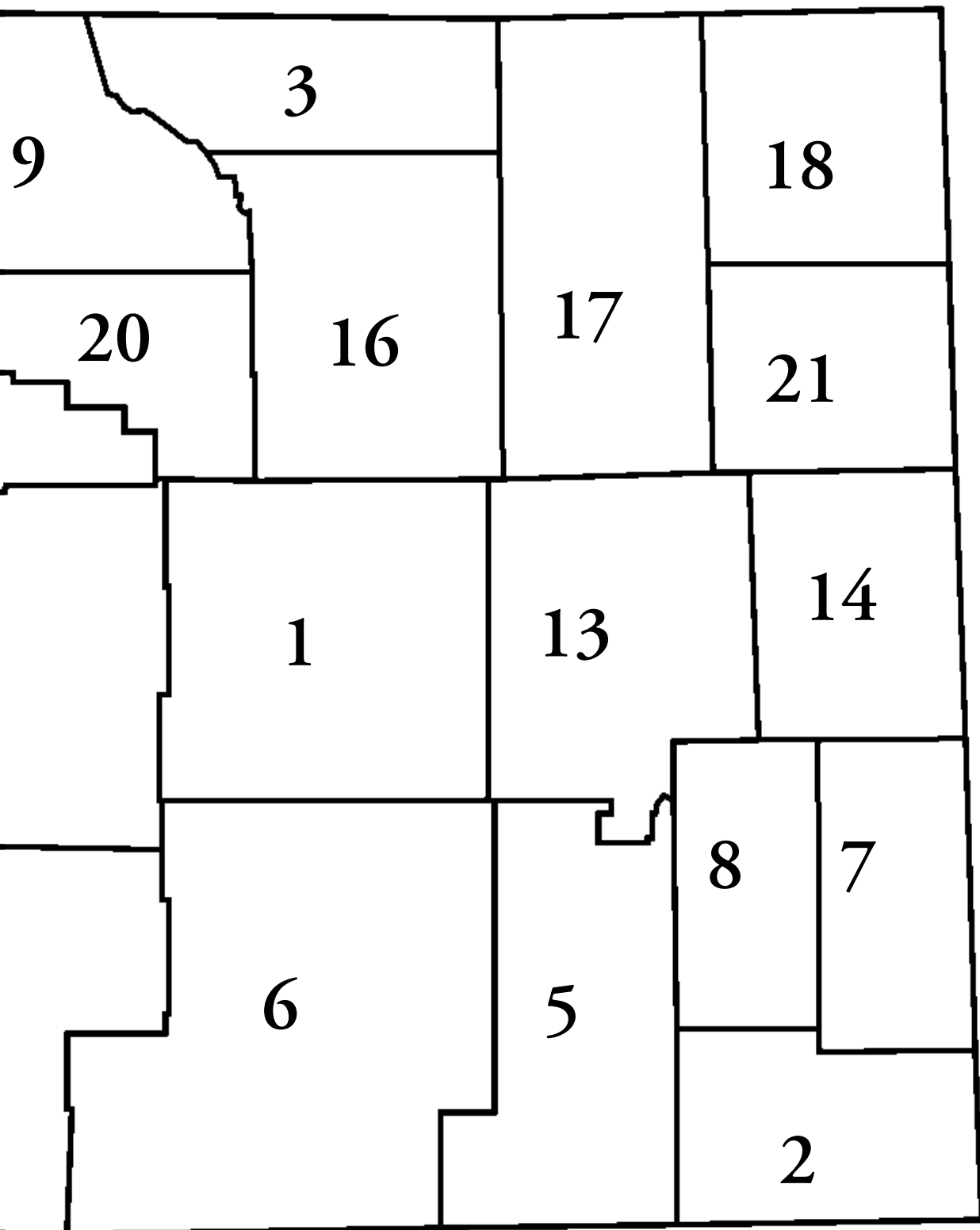
What number is your county? _____

Did you know that number is also o _____

List of Counties

Laramie, Sweetwater, Carbon, Platte, Fremont, Lincoln, Niobrara, Johnson, Crook, Washakie, Teton, Natrona, Sheridan, Albany, Goshen, Big Horn, Park, Converse, Hot Springs, Campbell, Uinta, Weston, Sublette

2. Notice what is produced in each county. Amazing isn't it! Agriculture people in Wyoming are busy people. Using the legend below - in front of each item produced in Wyoming, mark a symbol and color that will distinguish it from the other items (you will need 12 different colors or symbols). Now, look at what is produced in each county - make your distinguishing color and symbol in the corresponding county on the map. When you finish you will have a map completed with colored symbols that will tell you what is produced in each county.



LEGEND

- _____ BARLEY
(color dark blue)
- _____ OATS
(color dark purple)
- _____ BEEF
(color red)
- _____ POTATOES
(color yellow)
- _____ SHEEP
(color light blue)
- _____ CORN
(color pink)
- _____ SUGAR BEETS
(color light green)
- _____ DAIRY
(color brown)
- _____ WHEAT
(color black)
- _____ HAY (native & alfalfa)
(color dark green)
- _____ HOGS
(color grey)

on the license plates in your county?

Can you list some products grown in Wyoming that are found on the Food Guide Pyramid? (For example Wheat for Bread)



Answers are on page 8

Calorie Countdown

We need energy to breathe, to keep our hearts beating, to grow, for digestion, to maintain body temperature, and for all our daily physical activities. This energy is supplied through the foods we eat and in particular for the carbohydrates, protein, and fat nutrients. Our bodies convert the energy stored in food into energy that our bodies need. The potential energy value of foods and the amount of energy the body uses to rest, play or work is measured in units of heat called calories. We think of a calorie as the amount of energy we get from food. The U.S. Department of Agriculture recommends the calories in American diets (young and old alike) consist of approximately 50 percent carbohydrates, less than 30 percent fat, and approximately 20 percent protein.



Calorie Math

Use these charts to complete the math problems.



Calorie Counts of Foods

1/4 lb. Cheeseburger	525
French fries	225
Milkshake	325
1/2 small, thin supreme pizza	525
12 oz. Soda pop (not diet)	150
3 cups popcorn (not buttered)	100
6 oz. Fat free yogurt	90
glazed doughnut	150
chocolate & peanut candy bar	300

Calories Burned Per Hour

(For a 100 lb. Person)	
Bicycling	160
Football	225
Roller blading	260
Rope jumping	525
Soccer	405
Swimming	240
Walking	155
Watching TV	75

- How long would you have to walk to burn the calories in a serving of pizza? $525 \div 155 =$ _____
- How many times more calories does playing football burn per hour than watching TV? _____ $\div 75 =$ _____
- How many calories are consumed by drinking 3 cans of pop during the day? $3 \times$ _____ $=$ _____
- How long would you have to bicycle to burn the calories in a candy bar? $300 \div$ _____ $=$ _____
- How many more calories are consumed by eating a milkshake rather than yogurt? _____ $-$ _____ $=$ _____
- How many calories would be in a snack consisting of a candy bar and a soda pop? _____ $+$ _____ $=$ _____
- How many calories are in fast food meal consisting of a cheeseburger, french fries and a milkshake?
_____ $+$ _____ $+$ _____ $=$ _____
- Which of these foods should you choose for a low-fat, high-fiber snack? _____
- Which of these foods include ingredients from all five food groups? _____
- Which physical activity do you enjoy and practice most? _____

Answers: 1 - 3.39 hours; 2 - 3 times more calories burned; 3 - 450 calories; 4 - 1.88 hours; 5 - 235 calories; 6 - 450 calories; 7 - 1,075 calories; 8 - popcorn; 9 - cheeseburger (with lettuce, tomato, pickles, onions, bun, etc) and pizza; 10 - answer vary

Research shows some kinds of carbohydrates and fats are better than others. Complex carbohydrates provide long-lasting energy and help in digestion. Whole grain breads and cereals, fruits, vegetables, and beans provide complex carbohydrates. Simple carbohydrates, such as sugars, burn quickly. Thus, they don't provide any nutritional advantages. These includes candy bars, carbonated beverages, and many desserts. (That is why Fats, Oils and Sweets is not a food group). In addition to eating properly, physical activity adds to overall health. So we have learned that we need to eat healthy and also exercise.



VOCABULARY

Calorie - The unit of energy required to raise the temperature of one gram of water one degree Celsius; also measures the amount of energy foods provide.

Carbohydrate - Sugar, starches, and cellulose which serve as the body's main source of energy.

Fats - Concentrated energy source found in all body cells; carries fat-soluble vitamins through the body.

Minerals - Small, inorganic substances which have specific roles in the body.

Nutrients - Substances found in foods that nourish the body to keep it healthy, growing and active

Proteins - A series of amino acids serving as basic structural units; used to build and repair body tissues.

Simple Carbohydrates - Easily-digested carbohydrates such as, glucose, lactose, and fructose.

Complex Carbohydrates - Difficult to digest carbohydrates, such as starches and dietary fiber.

Vitamins - Complex organic substances needed in small amounts

FOOD SAFETY

You have learned how important it is to have a balance diet so you can feel better, grow stronger, and have more energy. But do you know that the food in the United States is some of the safest and healthiest in the world. Our farmers and ranchers are very careful about the health of their crops and their animals. Our food companies follow strict rules so that all our foods are safe and clean. Our stores also follow strict rules how to keep and sell food that is clean and safe. So now we need to learn how to take care of food once you get it home. By keeping our food safe in our homes, you will continue to grow strong.



“BACTERIA”

 *Look me up.*



It is important to follow some safety rules when handling or cooking food.

Bacteria is everywhere - in the food we eat, in the air we breathe, on surfaces we touch. Of the thousands of types of bacteria only a few make us sick. All foods contain bacteria but bacteria only grow to dangerous levels when food is mishandled.



Part 1

How much do you know about food safety? Read each of the statements below and decide whether you agree or disagree. Then put an X for your answer in the columns on the right.

	Agree	Disagree
1. It is very important to wash your hands with soap and water before you eat or touch food	<input type="checkbox"/>	<input type="checkbox"/>
2. The best way to defrost frozen foods is to leave them on the kitchen counter	<input type="checkbox"/>	<input type="checkbox"/>
3. Cooked foods should be tightly wrapped or covered and put in the refrigerator within two hours.	<input type="checkbox"/>	<input type="checkbox"/>
4. Ground meat will stay fresh in the refrigerator for one or two days	<input type="checkbox"/>	<input type="checkbox"/>
5. Fruits and vegetables can cause food poisoning	<input type="checkbox"/>	<input type="checkbox"/>
6. Meat, poultry and fish should be kept in the coldest part of the refrigerator	<input type="checkbox"/>	<input type="checkbox"/>
7. Eggs should be cooked until the white and yolk are not wet or runny	<input type="checkbox"/>	<input type="checkbox"/>
8. Eating raw eggs and meat is healthy because they have extra vitamins	<input type="checkbox"/>	<input type="checkbox"/>
9. Ground meat and poultry should be thoroughly cooked until there is no pink or red in the middle.	<input type="checkbox"/>	<input type="checkbox"/>
10. The cutting board used for raw meat or poultry should be washed before being used for fruits and vegetables	<input type="checkbox"/>	<input type="checkbox"/>

Part 2

Look at the rules below and compare them to your answers in Part 1. How many answers did you get correct and how many answers did you get wrong? Put a ✓ after each safety rule that you knew or did not know.

RULES FOR KEEPING FOOD SAFE	Rules I Knew	Rules I Didn't Know
• Always wash your hands before eating, handling foods, or cooking:		
• Wash your hands and the cutting board, counter tops, bowls, and utensils with hot soapy water after preparing raw foods such as chicken, meat, eggs and fish.		
• Keep hot foods hot (140° or above) and cold foods cold (40° or below). Bacteria thrive at “in between” temperatures. Don't leave leftovers on the kitchen counter; wrap and refrigerate them.		
• Wash fruits and vegetable before eating them.		
• Never eat under cooked or raw ground beef, chicken or pork.		

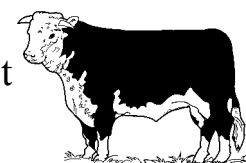
DID YOU KNOW...

A hamburger patty contains protein, zinc, iron, riboflavin, thiamin, and vitamin B-12? To get the same amount of these 5 nutrients found in a 3 - ounce serving of top round steak, you'd need to eat:

Zinc = 12 (3.5 oz) can of tuna
B12 = 7 (3 oz) chicken breasts

Iron = 3 cups of spinach
Riboflavin = 2 1/3 (3 oz) chicken breast

Thiamin = 2 (3 oz) chicken breast



I guess beef is really “What's for Dinner!!”

Wyoming Agriculture In The Classroom

TEACHER GUIDE

Volume 7

Answer Key from pages 4 & 5

COUNTIES	12.Lincoln
1. Natrona	13.Converse
2. Laramie	14.Niobrara
3. Sheridan	15.Hot Springs
4. Sweetwater	16.Johnson
5. Albany	17.Campbell
6. Carbon	18.Crook
7. Goshen	19.Uinta
8. Platte	20.Washakie
9. Big Horn	21.Weston
10.Fremont	22.Teton
11.Park	23.Sublette

If you want to continue your study on agriculture and need more information to enhance your classroom studies, please contact Sarka J. White, Education Coordinator with Wyoming Agriculture in the Classroom, 2219 Carey Ave., Cheyenne, Wyoming 82002, and (307) 777-6618. Wyoming Agriculture in the Classroom has an extensive resource library and training that is free to all Wyoming teachers. Visit our website at www.wyomingagclassroom.org for information and links to other agriculture literacy sites for educators and families.

Potpourri...Discussion Prompters and Projects

Some additional projects and ideas to extend the use of the "Country to Classroom" magazine.

- * Discuss examples of foods that are primarily carbohydrates, fats, or proteins. Many foods are actually a combination of the three, yet most are predominantly one.
- * Have the students keep a food diary for one or more days and have them list the types of physical activity they did during the day (running, basketball, etc). Afterward, the students should sort those foods in the Food Guide Pyramid. Compare the list with the Food Guide Pyramid. Are they getting a balance diet? Did their level of physical activity burn the calories they consumed. Explore food choices or level or physical activity changes they could do to grow healthy and strong.
- * Invite a dietitian or nutritionist to class to talk with students about all of the information on food labels. Calories are not the only reason for food choices. Invite the physical education teacher to discuss different kinds of exercises, how exercise "burns" calories, and the cardiovascular and psychological benefits of exercise. Invite the Family & Consumer Science Teacher to discuss: What determines food choices? What determines exercise choices? How can we be more in control of our choice in food and exercise?
- * Take a tour of the school cafeteria to learn more about food-safety practices. Have students generate a list of food-safety questions to ask the cooks and important points they would like to investigate about food safety while in the kitchen. Include finding out who writes the rules that the kitchen staff must follow and who investigates to see that the rules are being followed.
- * Have students research careers related to the Food Guide Pyramid and Food Safety. Some careers can include Wyoming Department of Agriculture Consumer Health Inspector, a Nutritionist, or a public health nurse..
- * Look at these web sites for more information: www.kidshealth.org, www.teachfree.com, and wyagric.state.wy.us to learn more about the Food Guide Pyramid and Food Safety.

Wyoming Content & Performance Standards 4th and 8th grades

Language Arts: 1. Reading; 2. Writing; 3. Speaking and Listening. **Science:** 1. Concepts & Knowledge; 2. Science as Inquiry; 3. History and Nature of Science in Personal and Social Decisions. **Social Studies:** 2. Culture/Cultural Diversity; 3. Production, Distribution, Consumption 5. People, Places, and Environment. **Mathematics:** 1.Numberand Operation; %. Data Analysis and Probability.

Germ Busters

Germs and diseases can be spread by people, animals, and non-living things. People spread germs through coughs, sneezes, unwashed hands, and direct contact with an infected area (skin infections for example) Washing our hands is the single most effective strategy in preventing a long list of illnesses.

Unwashed hands often carry germs into the mouth. This is particularly true when people fail to wash their hands before handling food or after using the bathroom. It is recommended to wash away bacteria and viruses is by vigorously rubbing soaped-up hands back and forth for at least 20 seconds. The time allows for the full benefit of soap's antimicrobial action. Any basic soap or detergent will produce similar results, because they break open the outer coat of bacteria, causing them to die. This lesson will demonstrate the spread of germs and will take two to three weeks to complete.

1. Purchase three large potatoes. The day of the experiment peel three similar potatoes. Wash all three potatoes for at least 20 seconds with soap and water after peeling them. Your hands and the peeler should be washed thoroughly before peeling the potatoes! Put each potato in a new, large, self-locking plastic bags to be used later. (Should have three bags with a potato in each bag).
2. Tell students that potatoes are being used in our experiment to discover how germs or bacteria can be spread.
3. Potato 1 is the unhandled potato in this experiment. Leave it in the bag and keep it sealed. Potato 2 is handled with dirty hands. Pass this potato around the room for all students to handle. (The dirtier the students' hands, the better.) Seal potato 2 back in its plastic bag. Be sure the bag has the same amount of air as potato 1. Potato 3 is handle LATER by students with properly washed hands and will then be sealed in a bag.
4. Conduct a handwashing activity with students. The ideal situation is a central sink your whole class can gather around. Show the students how to properly wash their hands (use soap and water for 20 seconds). Have students wash their hands, one student at a time. Stand by the students with a watch or stopwatch and time them for making sure they wash their hands for 20 seconds.
5. Have the students then touch the potato 3. It is very important that potato 3 be handled only by CLEAN HANDS. After the potato is handled, seal it in its bag with same amount of air as bags 1 and 2. Place all three bags together in a visible place.
6. Ask your students; What do you think a germ is?; Where do you think they live?; Can germs live on you? (yes, help your students understand that our hands are one of the most common places for germs); How big are they?; Do you think washing your hands does anything to germs?; Why do you thing it is important to use soap and water when washing our hands?; When is it most important to wash your hands? (Before eating and after using the restroom).
7. Have the students predict what they think will happen with potato 1, potato 2, and potato 3. After a week, pass the three bags around and have the students make careful observation and description of each bag. Keep this on a piece of paper. After another week, have the students make their last set of observations on the three bags of potato. (Make sure that potato 2 is showing dramatic microbial growth, before having the students complete their final observations, you might need to wait two weeks.) Ask the following: What was the initial difference you could observe about the potatoes? What were the difference between potatoes 1, 2, 3? Similarities? What did you observe over time? Based on your observations, what do you conclude about the potatoes? What recommendations would you make about handwashing based on your findings? What are important rules to follow when washing your hands? How can what you learned in this experiment help you decide when it is important to wash your hands?
8. To expand on the experiment use four potato. Potato 1 and 2 are treated exactly as in the first experiment. On potato 3 use regular soap and on potato 4 use antibacterial soap. See if there is a difference in the growth of bacteria on potato 3 and 4.

"COUNTRY TO CLASSROOM" is a publication of WYOMING AGRICULTURE IN THE CLASSROOM.

Wyoming Agriculture in the Classroom is a cooperative effort of many Agriculture organizations and individuals around the state. Materials are compiled from the following sources: Wyoming Department of Agriculture, United States Department of Agriculture, National Honey Board, Wyoming Ag in the Classroom, Montana Ag in the Classroom, Minnesota Ag in the Classroom, Oklahoma Ag in the Classroom.

Funded by Wyoming beef producers through their \$1-per-head beef checkoff.

