

Acknowledgements
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Dear Educator:

Welcome to the 4-H Pizza Garden: An Agricultural Adventure! You and your students are in for an exciting educational opportunity. This curriculum was designed for educators to teach young people about where their food originates by using something children love to eat...PIZZA! According to a recent Gallup poll, kids between the ages of 3 and 11 prefer pizza to all other foods for lunch and dinner. Americans eat about 100 acres of pizza each day, or 350 slices per second!

It is the hope that after completing the eight lessons in this curriculum, young people will think about all that is involved in bringing their slice of pizza to them.

We hope you enjoy using this curriculum with your students!

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Conducting 4-H Pizza Garden:
An Agricultural Adventure for the Classroom

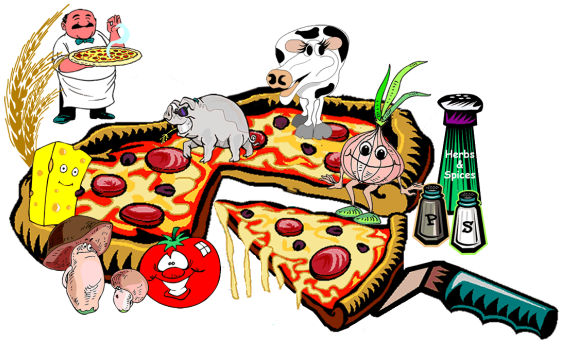
Introduction and Project Overview

This 4-H in the Classroom project, originating in Pinellas County, Florida, was designed for grades 3-5, but can be adapted to serve other grade levels. The lessons cover subject areas such as mathematics, social studies, language arts, and science. It has been used in Pinellas County very successfully since 2000 by the 4-H Program in collaboration with their Florida Ag in the Classroom Initiative.

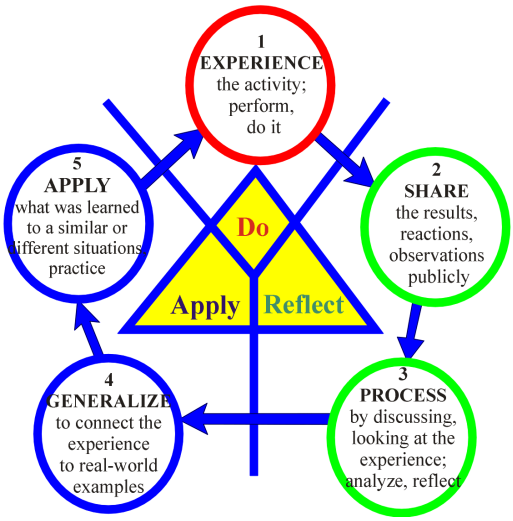
The curriculum includes eight lesson topics that provide a foundation for youth to learn about various agricultural products that are used to produce the pizza they often consume. In addition, lessons on nutrition, consumer decision-making, and related topics are incorporated to support the interdisciplinary subject matters.

Each lesson provides some BACKGROUND INFORMATION pertinent to the lesson topic. While some agricultural data is national in scope, other data is very specific to Florida being a large agriculturally based state. However, if your state is also a major agricultural producer, you may want to investigate more specific data. We have identified the USDA Agricultural Handbook Web site on the next page as a resource you or your students can use to expand the data provided in these lessons.

Each lesson identifies the specific STUDENT GOALS AND OBJECTIVES for the topic. In Florida, the NEXT GENERATION SUNSHINE STATE STANDARDS and the COMMON CORE are the educational standards used for competency assessment in the Florida School System. The coded standards are provided, in complete form, indexed for quick reference and classroom planning in Appendix C. We hope this listing may be helpful to those educators in other states to translate standards against similar assessment standards.



An Experiential Model
for Effective Teaching
and Learning Experiences



Additionally, each lesson targets a LIFE SKILL that 4-H Programs target as a long-term outcome for youth development. The enhancement and focus to this "life skill" is developed through an EXPERIENTIAL LEARNING PROCESS that 4-H programs incorporate into their curriculum. The learning experience begins by engaging youth in a subject matter activity. However, this engagement is not complete without helping youth reflect and learn from the experience. It is through this process that we strive to help them transfer and apply the knowledge and skills acquired to their life.

The curriculum uses a variety of lesson experiences and activities targeted at various learning styles, classroom environments and resources. Websites are identified below and are noted as appropriate within the lesson guides. Many hands-on activities, individual or for group cooperation, are incorporated into the curriculum. One of the culminating highlights of the curriculum has been a PIZZA GARDEN FIELD TRIP! A guide to planning and an outline of what to do follows this introduction. Additional preliminary project activities that have evolved through use by various educators during the development and implementation period are also included for your use.

Web sites

Agricultural Statistics and Census data:
http://www.usda.gov.

Evaluation

An important part of any curriculum is evaluation; student and teacher evaluation tools are included in Appendix B. Educators are encouraged to use the student evaluation tools to see the increase and retention of learning in their students. STUDENT EVALUATION KEY :1-d; 2-c; 3-d; 4-T; 5-b; 6-T; 7-d; 8-b; 9-b; 10-F; 11-T; 12-a.

The PRE-TEST should be given just before the first lesson. This is used for baseline information to see how much students understand.

The POST-TEST should be given after Lesson 8 activities have been completed. The results from the pre- and post-test measure knowledge gain.

Then the POST-POST-TEST should be given two months after the post-test to account for knowledge retention. There is also a TEACHER EVALUATION included. It would be greatly appreciated if this could be returned to the address provided at the end of the evaluation.

The overall curriculum objectives are summarized with key evaluation questions coded after each objective for your use in reporting results. As a result of this curriculum, students will demonstrate:

- Increased knowledge of the value of agriculture in food production and packaging. (Q1,Q2,Q11)
- Increased knowledge of the origins of selected foods. (Q3,Q4,Q9,Q12)
- Increased knowledge of the foods needed daily to maintain a healthy diet. (Q5,Q8)
- Increased awareness that pizza can be a healthy food. (Q6,Q8)
- Increased skills in consumer decision-making. (Q7,Q10)

Student Recognition

Recognition of student achievement is very important. CERTIFICATES and STICKERS are available for students participating in this program (see Appendix D). As they complete each lesson, they place a sticker in the appropriate box on their certificate.

Funding

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http://www.spiceadvice.com/history/index.html

http://www.greenbush.net/historyofherbs.html

http://www.fns.usda.gov/tn/myplate

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Free information to download and print.
IFAS educational resources online catalog.

Planning a Pizza Garden Field Trip

The field trip portion of the Pizza Garden program is optional, but it adds a wonderful element to the youth's experience. The field trip allows the youth to further apply the knowledge they learned from the curriculum. In urban and some rural areas, this is an opportunity to expose youth to live animals for the first time in a fun and safe setting. The following are guidelines developed from experiences of organizing this event in Pinellas County, Florida. Depending where you live, you may want to change things to better fit your needs.

Tips to Remember

- Begin planning the adventure at least 2-3 months prior to the field trip date.
- 1½ - 2 hours is sufficient time for this field trip (each workshop is 20 minutes).
- Look for support from your local 4-H department, County Farm Bureau, and FFA chapters.
- Commodity groups are a great resource for items for the goody bags.
- You do not need to live in a rural area to make this field trip possible.
- Don't be afraid to ask for donations. The worst anyone can say is no!

Steps to Planning the Field trip

- Decide how many youth will be involved in your field trip. This is important because it will determine how many workshops you will offer. Ideally there should be no more than 25 youth per workshop. For example if you have 200 youth, divide by 25 (maximum youth per workshop), you would need a minimum of 8 workshops.

- Brainstorm a list of the types of workshops you would like to have. In Pinellas County, Florida we had eight 20-minute workshops and each youth participated in four workshops. Our concentration was on agricultural commodities that are vital for Florida, but you can tailor your workshops to fit your state. The following were our workshops:

  "**BEEFO: Beef By-products**" - Youth had the opportunity to pet a beef steer as the presenter talked about the animal and it's uses. This was followed by the youth playing a bingo-type game called "BEEFO" which taught them that many of their everyday products came from a beef cow. After the game they were entitled to pull a by-product prize from a box. By-product items used were things that youth relate to, such as, gum, temporary tattoos, and crayons.

  "**PORKO: Pork By-products**" - Essentially the same as the BEEFO workshop, except that a pig in a pen was the invited guest and PORKO was played.

  "**How to Make Cheese**" - Instead of cheese made from cow's milk, we put a different spin on things and had dairy goats make a visit. After visiting with the goats, the youth received a demonstration on making cheese, learned about the history of cheese, and then were treated to a sample of the cheese.

"**Butter Making 101**" - The youth first visited with a dairy cow, as they received a short presentation about their milk production. Each student then made their own pat of butter by shaking it themselves in a closed catering cup (can also use baby food jars) and then tasting it on crackers. Before leaving this workshop they get to pet and say good bye to the dairy cow.

"**Make Your Own Watershed**" - The youth learned about the importance of water in agriculture, the importance of keeping our water clean, and the importance of conservation. An Enviroscape model was used as a demonstrator. Then each youth made their own sample watershed using a graham cracker as the base, a candy kiss for a mountain, chocolate icing for the soil, and vanilla icing colored green and blue for the grass and water respectively. After they shared their watershed designs with each other, they got to eat their watershed.

"**Mr. Veg Table**" - With lots of vegetable choices on a pizza, it is important to have youth experience growing their very own vegetable. Youth learn about how vegetables are produced and what are the big vegetable crops in Florida. This is then followed by a planting session where they pot their very own vegetable seed to take back to their classroom or home. Two workshops of "Mr. Veg Table" were offered simultaneously.

"**How Does Your Pizza Box Grow**" - This workshop is designed to show youth that more than their pizza comes from agriculture, so does their pizza box. A discussion is generated on trees and their importance followed by the youth making paper.

- Location, location, location! Next you need to decide where to have your field trip. The number of workshops determines space. A number of different options could be available to you. In Pinellas County we have a large amount of land at our Extension office, so we set up eight workshop stations far enough apart where they would not be disturbed by another workshop. We make each workshop area a little different to fit in with the workshop title. Make things unique by having the students sit on hay bails instead of chairs or on paper plates with tree rings drawn on them. When you decide what workshops you will be doing, it will be easier to assess your decorating needs, but remember kids love the visual appeal. Other options for location could be a fairground (this works well because if parts are indoors this helps to not have to worry about rain), a local farm, or a school field.

- What's for lunch? If your field trip is close to or built around the lunch hour you may want to consider getting pizza donated. If you explain to your local pizza retailer the purpose of this program and how it helps their business too, you may find yourself with some free or at-cost pizzas. You could offer to put up a sign with their name and logo, and then after the field trip is over have some of the groups/classes write thank you letters to the business (the businesses love this, especially if they can display it). Another option is to have students bring a bag lunch and have an area set-up for them to eat.

- How do I schedule all these kids? If you are working with schools, it is pretty easy because you can just have each class be a group. If not, separate them in groups of no more than 25. The best advice is to make sure your groups are established before all the youth arrive to the field trip. A letter sent to school teachers telling them which groups their class will be works well. A sample of the workshop schedule is presented on the next page. As you can see, you can make it fun by naming each group a part of the pizza. The kids will always remember they are part of the pepperoni group versus just Group #2.

- Goody bags are a fun and educational part of the field trip because it is not only something for the youth to look at and think about the field trip, but it is also something most kids will share with their parents and siblings. This then passes on the importance of agriculture to more people. The best way to fill a goody bag is to call local, state, and national commodity groups and tell them what you are doing and ask if they have items they can donate. We have received stickers, pens, pencils, mini orange juicers, temporary tattoos, rulers, and coloring books to just name a few. They all had some sort of educational message and/or promoted agriculture.

  A commodity group, your local Chamber of Commerce, or Convention and Visitors Bureau, will often donate the goody bag itself. The goody bags can be handed out at the beginning of their visit, so they can add any materials they receive in their workshops. A concern may be they will be paying more attention to their bags than their first workshop; in our experience, this has not really been a problem.

- Where can I find presenters? You would be surprised how many people are willing to share their expertise if you just ask them. Let them know right up front what you are trying to accomplish and what you are asking of them. Your local Farm Bureau, FFA, and of course 4-H (assuming you are not already from the 4-H department) can either offer you leads for presenters and/or will have presenters themselves. They could also help you find animals to bring to the field trip.

- Volunteers…yes you need a lot! Volunteers beyond presenters are critical to the success of your Pizza Garden Field trip. Since the workshops should be hands on, you probably will need two volunteers per workshop and a few at the lunch area if you are serving pizza. You can use one of your workshop volunteers as a guide, meaning they can lead a group from one workshop to the next for the entire workshop and then help out at each workshop. The other volunteer just stays at the same workshop through the field trip, as the right hand man or woman of the presenter.

- "So, where is the pizza garden ma'am?" Good question and it will probably be asked. Many youth will envision arriving to your field trip to a huge pizza shaped garden. Unfortunately, that is not possible, so instead help them understand the concept better by marking off a large area in the shape of pizza using baseball line chalk. Then mark off slices of the pizza with the chalk. Make sure your pizza is big enough, so each slice can hold up to 25 youth. Then name your slices using a sign on a wooden stake with the corresponding group names (i.e., pepperoni, mushroom, etc.). This makes a great holding area as groups are arriving to the field trip! It also is a great place to talk to the groups about the field trip and the rules they need to follow. It is at this time that you can explain that each workshop is a part of the pizza, so they will be leaving their slice soon. Have fun with this as you release the groups by seeing who can chant their group name the loudest as they head off to their first workshop. It gets them even more excited than they already are.

Sample Workshop Schedules

TRACK 1				
	Pepperoni	**Mushroom**	**Veggie**	**Cheese**
10:50-11:10	Water	Beef	Vegetable	Dairy Goat
11:10-11:15	Change workshops			
11:15-11:35	Vegetable	Water	Dairy Goat	Beef
11:35-11:40	Change workshops			
11:40-12:00	Dairy Goat	Vegetable	Beef	Water
12:00-12:05	Group for Lunch			
12:05– 12:25	LUNCH			
12:25-12:30	Change workshops			
12:30-12:50	Beef	Dairy Goat	Water	Vegetable
12:50	HAVE A SAFE TRIP HOME!			

TRACK 2				
	Pineapple	**Sausage**	**Bacon**	**Combo**
10:50-11:10	Dairy Cow	Vegetable	Pork	Forestry
11:10-11:15	Change workshops			
11:15-11:35	Forestry	Dairy Cow	Vegetable	Pork
11:35-11:40	Change workshops			
11:40-12:00	Pork	Forestry	Dairy Cow	Vegetable
12:00-12:05	Change workshops			
12:05– 12:25	Vegetable	Pork	Forestry	Dairy Cow
12:25-12:30	Group for Lunch			
12:30-12:50	Lunch			
12:50	HAVE A SAFE TRIP HOME!			

Optional Preliminary Class Activities

Before you begin the lessons in this curriculum it is suggested that you do these pre-lesson activities with your students so they can gain an awareness of agriculture.



Activity #1
Begin a discussion with your students by asking the following questions:

- Who has ever heard the word agriculture?
- What do you think it means?
- After getting the students to understand that agriculture means the growing of crops and the raising of animals, or in simpler terms — farming, ask the following:
- What kind of meat do you like to eat on your pizza?
- What kind of animal would need to be raised in order to provide that meat?
- What kind of vegetables could we use in making our pizza?
- Do farmers grow a lot of those types of vegetables where you live? In your state?
- Is there a lot of agriculture where you live? In your state?
- Who lives on a farm? or Has lived on a farm previously?
- What do you grow on your farm?

Activity #2
Play the Pizza Garden Survivor game.

4-H Pizza Garden: An Agricultural Survivor

This game was designed to teach basic agricultural concepts to students before they begin the *4-H Pizza Garden: An Agricultural Adventure* curriculum. These questions can be changed/adapted for the level of youth and to fit the agricultural commodities in your state.

Directions:
1. Break into groups of 4-5 youth.
2. Each group needs about 10-15 pieces of 8½ × 11 inch paper cut in half and a marker.
3. Have the youth draw and cut 8 slices of pizza for each team out of the half sheets of paper.
4. Ask the questions out loud. Once you are finished each group is to write down what they think is the correct answer. The correct answer is in **bold print and underlined**.
5. All groups hold up their answers as the instructor says the correct answer. If the group was correct they get to start building their pizza with the first slice. The game continues in this manner until the first team puts all of their pizza pieces together. If a team gets an incorrect answer to any of the questions then they need to take a piece of their pizza away.
6. The first group to form a pizza wins a prize (optional).

What is the definition of agriculture?
A. The wearing away of the earth
B. The growing of crops and raising of animals
C. The person who works on a farm

In the 4th millennium B.C., the invention that marked the beginning of agricultural civilization was a device drawn by oxen. Name this device.
A. Rake
B. Shovel
C. Plow
D. Hose

Which state has the most (greatest percentage) land farmed?
A. Iowa
B. Florida
C. Arizona
D. Washington
E. New Jersey

Which state produces the most grapefruit?
A. Texas
B. California
C. Florida
D. New York

If they were all planted at the same time, which garden product would be first to ripen?
A. Corn
B. Chilies
C. Radishes
D. Pumpkins
E. Tomatoes

Which state is in the corn belt?
A. Utah
B. Kansas
C. Oregon
D. Vermont
E. Louisiana

Agriculture needs to feed all the people in the world. How many billion people are there in the world?
A. 7 billion
B. 2 billion
C. 20 billion
D. 300 billion

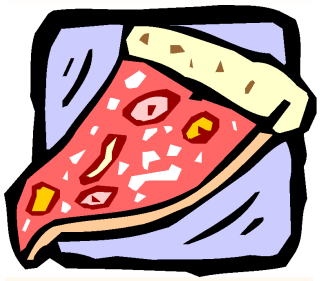
Sugar is found in which food?
A. Soda
B. Candy
C. Cereal
D. All of these foods

A by-product is something that is made in the process of making something else. Which of the below is a by-product?
A. Paint
B. Gelatin
C. Paper
D. Gum
E. All of the products above are by-products

Add questions that relate to agriculture and the state where you live!



Pizza Works!



Goals and Objectives:

- Students will become aware of at least five careers in agriculture/food industry.
- Students will understand where their food originates.
- Students will understand the sequence of the production processes in the making of pizza.

MAIN IDEA: Agriculture is necessary for food production.

GRADES: 3-5

LIFE SKILLS: Critical Thinking
Accepting Differences

SUBJECT AREAS: Language Arts
Career Preparation

STANDARDS: Located in Appendix C

DURATION: 30-40 minutes for each activity

SETTING: Indoors; classroom with desks or tables

SUPPLIES: Set of Career Cards (Appendix A)

Background Information

Careers in Agriculture and the Food Industry

With the advancement of technology, more and more jobs are being created in agriculture and the food industry. Many farmers now have college degrees in agriculture in order to keep up with new innovations. Business management and communication are also important skills. Farmers have a huge challenge in front of them. By 2050, there could be 9 billion people on this planet that will need to be fed. It is important that youth understand the importance of agriculture in their daily lives.

Here are a few interesting facts about how science and technology have helped farmers:

- In 1850, each U.S. farmer produced (by growing or raising) enough food to feed five people.
- By 1940, each U.S. farmer produced enough food to feed 19 people.
- Today, each U.S. farmer produces enough food for 129 people.

Food Production

The production process involves three primary groups: raw goods producers, middlemen, and consumers. The **raw goods producer** is the individual that produces raw materials such as crops and livestock, lumber, and so on. The farmer is known as a raw goods producer. Farmers are involved in the everyday activities of growing a crop or raising livestock.

The **middlemen** consist of processors, distributors, and retailers. The processor takes the raw goods (i.e., tomatoes) and creates new products, such as sauce for pizza. A distributor picks up large quantities of sauce and delivers to retail stores. Distributors may also put products into a warehouse for later delivery. Retailers sell directly to consumers (i.e., a supermarket).

Consumers are the third link in the chain. They are anyone who buys a product.

Introductory Activity

How many of you like pizza? Have you ever thought about where your pizza comes from before you sit down to eat it? Let's think about all the people that it takes to provide a pizza for us, from the farmer to the pizza delivery person.

Have the class brainstorm all the jobs that people have in order to provide a pizza to them and write them on the board.



Pizza Works Activity

We now know that many careers are involved in producing a pizza. For this next activity, each student in the class will become a person with a career in the agriculture or food industry field.

1. Each student needs to select a career card (Appendix A).

2. Assign students to write a paragraph about what this person does in his or her career. Have students include the following information:

   Give a basic description of duties in this career.

   What experience is needed for this position?

   What education is required for the career?

   What is the approximate amount of money you would make in this career?

Here is a sample list that your students may come up with:

Raw Goods Producers
Vegetable farmer
Tree cutter
Grain farmer
Dairy farmer
Livestock farmer
Crop scientist
Fertilizer plant worker
Soil scientist/specialist

Middlemen
Cheese processing worker
Vegetable canner
Butcher
Bakery worker
Grocery store manager
Trucker
Nutritionist
Warehouse worker
Family and consumer science professional
Quality control worker
Packaging production worker
Pizza delivery person
Waiter/waitress
Pizza maker

Consumer
Person who eats the pizza (the teacher can have this career)

Let's Think It Over…

1. Have each student present their findings, representing their career card, to the class.

2. Have the students compare and analyze the careers for common characteristics. You may want them to do this as a large group or in small groups. This may be done as a fun, active process or use a more analytical, charting method, depending on the grade level. Here are a few suggestions:
   - For a large group, incorporate physical activity and have the youth move to different spaces around the room if their career matches a named characteristic.

For example, all careers that:

1)	work outdoors (rural, farm)	vs.	work inside (urban, office)
2)	require lots of experience	vs.	little experience required
3)	requires lots of education	vs.	little education required
4)	pays (*x* range) of money	vs.	pays (*y* range) of money

- Small groups could create a chart of their careers to share with the class.

Continue to help them analyze and think critically about these career choices:

- Were there other factors that they saw that were similar or different?
- Did education affect the amount of income (money) earned?
- Did education affect where they worked?



Taking It a Step Further…

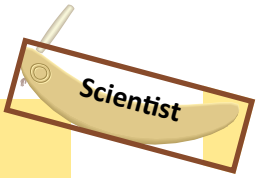
The[illegible]re three steps (raw g[illegible]ducer, middleman, and c[illegible]umer) in the process of producin[illegible] a pizza. Now that the class has learned about some of the careers in this pro[illegible]ction process, they need to determine in what part of the production process th[illegible] career belongs.

1. Review with the students the three s[illegible]ps in the process of production.

2 Start by dividing students into groups [illegible]f four or five. Within their small groups, have them decide in which of [illegible]e three steps of production their careers belong. Gather the class toge[illegible]er and have all the careers in raw good production stand togeth[illegible] middlemen stand together, and the consumers stand t[illegible]ether.

   Hint: All their careers will be either a[illegible] a raw good producer or middlemen, but see if the students [illegible]e able to understand this on their own. (Consumers should just[illegible]e the teacher.)

3. Next, challenge the two groups to come together to form a pizza (a circle) and with their careers in the right order of production. Hint: See the headings for each list of careers on the previous page.



Try This…

Punch holes in either side of [illegible]e career cards. Using ribbon o[illegible]ng shoe laces, make a lan[illegible]d for each youth to be able to "wear" their career card f[illegible] these activities.

Let's Think it Over...

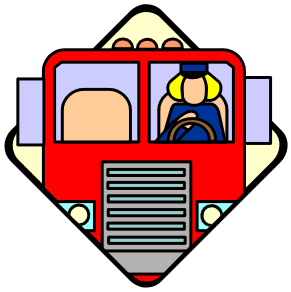


- Which of these jobs are very important for us to have pizza? What about other foods we eat?
- How does this activity help you appreciate the various jobs different people do to provide us with food?
- Would we be able to have food at our tables without these people doing these jobs?
- Should people who do different jobs be treated with the same respect?
- Who has family members who work in the agricultural/food industry?
- What types of agricultural/food industry jobs are available where you live?
- Which job in agriculture/food industry would you like to do?



Let's Apply...

- What do you want to be when you grow up? What things will you consider?
- Write a paragraph about this career.
- Draw a picture of yourself in this job.
- Compare this career to the one you wrote about previously. Which one do you like better? Why?





Wheat Watchers!



Goals and Objectives:

- Students will be able to identify wheat in its natural state.
- Students will use their five senses to identify properties of wheat products.
- Students will identify at least five products made from wheat to understand where some of their food originates.

Main Idea: Wheat is an important agricultural product we depend upon in our food supply system.

Grades: 3-5

Life Skills:
Observation and Communication Skills

Subject Area:
Language Arts

Standards:
Located in Appendix C

Duration:
30-40 minutes for each activity

Setting:
Indoors; classroom with desks or tables

Supplies:
- Sample of wheat
- Tissue/small box to create a touch box
- Whole wheat crackers & enriched wheat crackers (1 of each per student)
- Wheat Watchers Observation Sheet (master provided, 1 copy per student)

Background Information

Wheat has been a staple in man's diet all over the world throughout history, and it is a main ingredient for the pizza dough most of us love to eat. Wheat gives many needed nutrients, and it makes a significant contribution to the human diet. Unfortunately, Americans are only eating on average four servings of the bread, cereal, rice, and pasta food group even though 6 to 11 servings are recommended.

Wheat was an important discovery because man could grow it during the summer, store it for winter food, and then use the leftovers to grow more wheat in the spring. This meant that man no longer had to rely solely on catching game and foraging for food. It is estimated that man first started eating a form of flat bread (a baked combination of flour and water) made from wheat about 10,000 B.C. Ancient Egyptians are believed to be the first to bake white leavened bread as we know it today in about 3000 B.C.

Did you know...?

- A bushel of wheat weighs about 60 pounds.
- A bushel of wheat yields about 42 pounds of white flour or 60 pounds of whole wheat flour.
- A bushel of wheat makes about 70 to 73 one-pound loaves of white bread.
- Each person in the United States consumes about 180 pounds of wheat per year.
- The state that produces the most wheat is Kansas.



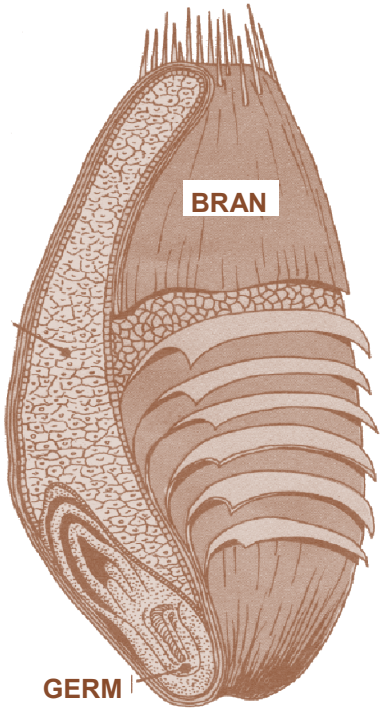
Did you know?
You can purchase samples of wheat at a craft store or at a local feed store.

Parts of Wheat

The *Kernel of Wheat* is also known as the wheat berry. The kernel is the seed from which the wheat plant grows. There are three parts of the kernel: the *endosperm*, *bran*, and *germ*.

The *endosperm* makes up 83% of the kernel weight and is the source of white flour. The endosperm contains the greatest share of protein, carbohydrates, iron, and major B vitamins (riboflavin, niacin, and thiamin). It is also a source of soluble fiber

The *bran* is about 14.5% of the kernel weight. Bran is included in whole wheat flour and can be bought separately. The bran contains a small amount of protein and large quantities of dietary fiber, three major B vitamins, and trace minerals.



Kernel of Wheat

The *germ* is approximately 2.5% of the kernel's weight. The germ is the sprouting section of the seed. It is often separated from the flour in the milling process because its fat content limits flour's shelf life. It contains minimal high quality protein, but it does have some B-complex vitamins and trace minerals. Wheat germ can be purchased separately and is part of whole wheat flour.

Introductory Activity

Put the sample of wheat into a small box and tape it closed. Then cut a small hole to create a "touch box." Let each student feel what is inside of the box, without telling anyone what he or she thinks it is. Have them write it down on a piece of paper until everyone has had a turn with the touch box.

Let's Think About It…

Ask class how many think they know what is in the box and discuss what they experienced.

- Is the item in the box alive?
- How did the item feel when touched?

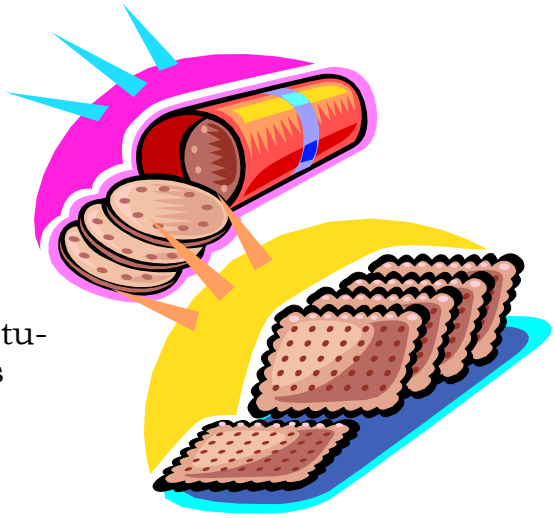
Write a list on the board of the student's guesses.

- Which items on the list can be eliminated and why?
- What is the class consensus of what is in the touch box?

Let's Apply…

Share some of the important facts in the background basics section of wheat with your students. Then brainstorm all the different food items they eat, other than pizza dough, that are made from wheat.

- How many serving of grains, like wheat, do you need to eat each day?
- Where does most of the wheat in the United States grow?
- What foods were you surprised about that are made from wheat?



Wheat Watchers Activity

Give each student one whole wheat cracker and one enriched wheat cracker. Using the WHEAT WATCHERS OBSERVATION SHEET provided, have each student use their five senses and list their observations about the two crackers using as many adjectives as possible.

Let's Reflect…

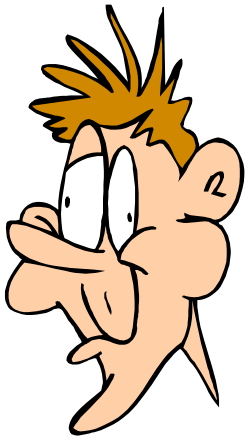
- Which of the five senses was the easiest to use to list adjectives/ descriptors?
- How did they taste different/the same?
- When you took a bite out of each cracker was there a difference when you bit down?
- Before you took the taste test did you think you would like one cracker more than the other? Did you change your mind after tasting?
- Do you think by doing this taste test you will be more aware of your five senses as you taste your food in the future?
- What surprised you about your observations?

Let's Apply…

- Why is it important to be observant?
- What do you think would happen if you lost one of your senses? Could you still be observant? Why/why not?



Wheat Watchers Observation Sheet

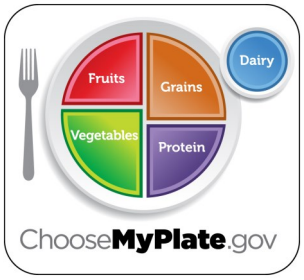


Name: _____ Date:_____

Senses	Whole Wheat Cracker	Enriched Wheat Cracker (ex. Saltine)
Sight		
Touch		
Smell		
Hear		
Taste		



"May I Take Your Order Please?"



Goals and Objectives:

- Students will know the food groups and amounts needed per day for each food group.
- Students will be able to calculate the amount of food needed daily from the food groups in two slices of pizza.

MAIN IDEA:
For good health you need to eat foods from all food groups.

GRADES: 3-5

LIFE SKILLS:
Acquiring, analyzing and using information

STANDARDS:
Located in Appendix C

DURATION:
30-40 minutes for each activity

SETTING: Indoors; classroom with desks or tables

SUPPLIES:

- MyPlate BINGO game cards (master provided; one copy per student)
- MyPlate BINGO marker cards (master provided; one copy per student)
- MyPlate Food Cards (Appendix A)
- Calculate MyPlate Pizza activity sheet (master provided; one copy per student)
- MyPlate Poster

Background Information

Florida ranks number two in the United States in the production of vegetables, with sales of $1.7 billion. Vegetables rank first in the sales of 19 major products, including tomatoes and green peppers, which are important pizza ingredients. While lots of ingredients go into the process of making pizza, it is the tomatoes and the additional vegetable toppings that add even more nutritional value.

MyPlate is an excellent tool to teach young people not only the amounts of vegetables they need in their diets, but also about all the food groups. MyPlate is used to help you eat better everyday – the Dietary Guidelines way. It teaches that no single food group is more important than the others, but for good health you need them all. MyPlate focuses on the five major food groups and the importance of including each in our daily diet. One of the main messages of MyPlate is to make half your plate fruits and

Advance Preparation:

1. Download MyPlate mini-poster in PDF: http://www.choosemyplate.gov/downloads/mini_poster_English_final.pdf.
   Or you can order the MyPlate Poster, which is free to elementary schools and child care providers upon request from Team Nutrition. (USDA221 and USDA 222, limit 1 in each color). To order poster and other materials, go to http://www.ntis.gov (must start order to see if poster is out of stock). For other MyPlate inquiries, please email USDAFNSTN@NTIS.GOV.
   There is also a MyPlate Make half your plate fruits and vegetables poster that will work well with this lesson. Download at http://www.fns.usda.gov/tn/Resources/myplate_halfplateposter.pdf.
   Or order from Team Nutrition (USDA 225, limit 2).
2. Cut out **BINGO Marker Cards** to mark the **BINGO Game Card.**
3. Have enough pencils with erasers and game cards for each youth to have one.
4. Cut out **Food Cards** (Appendix A) for the teacher

Introductory Activity

Familiarize students with MyPlate by playing MyPlate BINGO activity in this section. Make sure students understand the recommended amounts per day from each food group.

MyPlate BINGO is a fun game to help youth learn about the five food groups. Remember, no one major food group is more important than another. For good health you need all the food groups.

MyPlate BINGO: How to Play

1. Hand out MYPLATE GAME CARDS, pencils, and BINGO MARKERS to each youth.
2. Using the MYPLATE GAME CARDS, have youth write five different foods under each food group. "Eat a Variety of Foods" is a free space on the game cards. If youth have difficulty thinking of five foods, use the MYPLATE POSTER to help them.
3. Once they have chosen their foods for each group, no one is to write on the card.

To start the game, the teacher draws a FOOD CARD. After a food is called, the teacher should put the card by the food group for checking.

If a player has a food that was called out written on their MYPLATE BINGO GAME CARD, the player puts a BINGO MARKER CARD on that space.

Players can win three ways:

- by filling in a column (down) with names of five different foods from one food group and calling out "MyPlate BINGO";
- by filling in a row (across) with five foods (one from each of the food groups) and calling out "MyPlate BINGO";
- by filling in five foods on a diagonal row and calling out "MYPLATE BINGO."

To check a winner, the player calls out the name of the food written in each space. The teacher checks to see if all the foods have been called and are different. Reward the winner by letting them call the next game.

Have players remove all their markers before starting a new game.

After the game, ask the following questions:

- What are the five food groups?
- From which food group do you need 5-6 ounces each day?
- From which food group do most youth ages 9-13 need 2.5 cups daily?
- From which food groups do most youth ages 9-11 need 3 cups of?

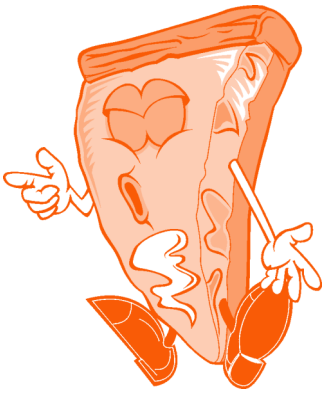
This activity was adapted from Lesson 1: Basic Food Groups, FOOD, FUN AND FITNESS Curriculum, Department of Family, Youth and Community Services, University of Florida.

Let's Apply…

Take your MYPLATE BINGO GAME CARD and draw a star by the foods you have eaten in the last 24 hours.

- How much did you eat from each food group?
- Do you need to eat more from some food groups? From what food groups?
- What foods do you need to add to your diet?

"Calculate MyPlate Pizza" Activity



Reinforce MyPlate concepts by having students complete the CALCULATE MYPLATE PIZZA activity sheet.

Let's Think it Over...

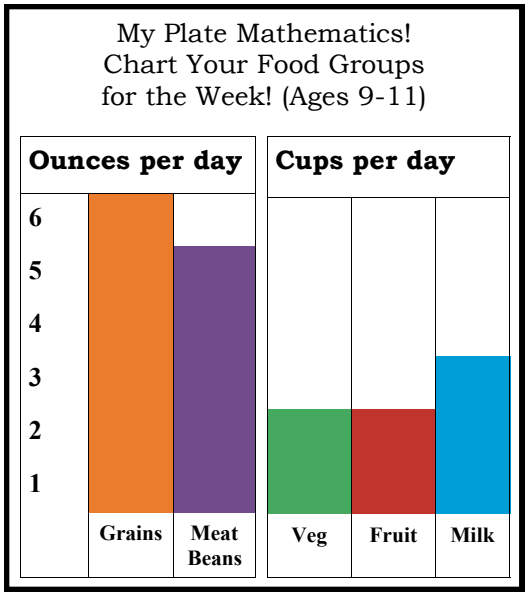
After completing the CALCULATE MYPLATE Pizza activity sheet, discuss the following:

- What other foods did you eat today and where do they fit on MyPlate?
- With these foods added, how much more food do you need to make your plate complete?
- What are some foods you could eat the rest of the day to make sure you complete your plate? How much of these foods do you need for the day?

Let's Apply...

Young people seem to have a hard time eating enough fruits and vegetables. Have the students keep a FOOD JOURNAL of the fruits and vegetables they eat for one week. After one week, discuss the following:

- Was your plate complete each day?
- How many days did you eat enough fruits and vegetables?
- Was it hard to get enough fruits and vegetables in your diet?
- What are ways you can eat more fruits and vegetables?
- How did charting what you ate each day help you "see" how your choices affect your health/nutrition?
- What changes do you need to make?

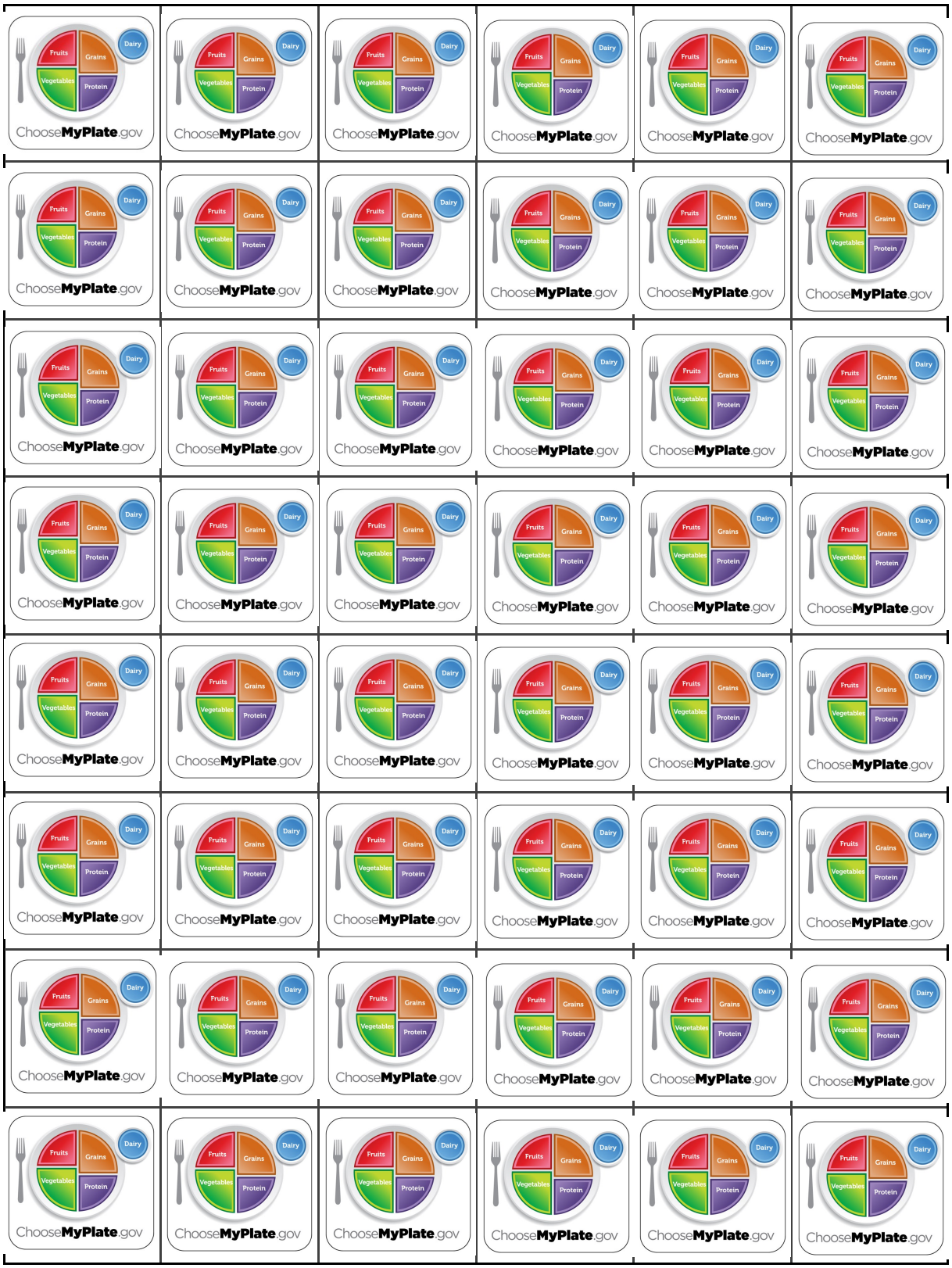


MyPlate BINGO Game Card

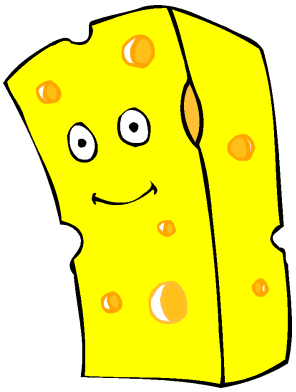
Grains	Vegetables	Fruit	Milk	Meat and Beans
				
		Eat A Variety Of Foods		

This activity was adapted from Lesson 1: Basic Food Groups, FOOD, FUN AND FITNESS Curriculum, Department of Family, Youth and Community Science, University of Florida.

MyPlate BINGO Marker Cards

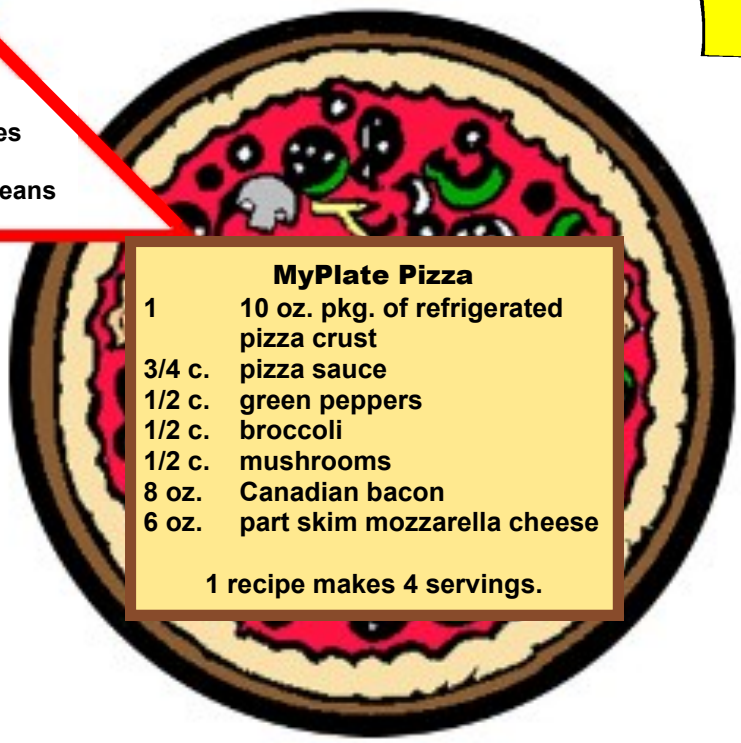


Calculate MyPlate Pizza!



1 Slice =

1 ounce of grain
1/4 cup of vegetables
1/2 cup milk
1 ounce of meat and beans



MyPlate Pizza

1	10 oz. pkg. of refrigerated pizza crust
3/4 c.	pizza sauce
1/2 c.	green peppers
1/2 c.	broccoli
1/2 c.	mushrooms
8 oz.	Canadian bacon
6 oz.	part skim mozzarella cheese

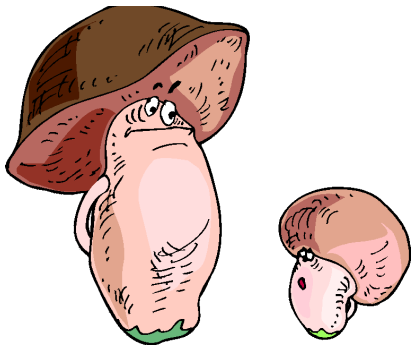
1 recipe makes 4 servings.

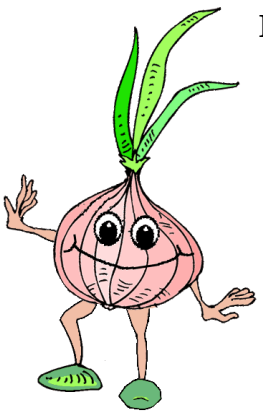
If you eat 2 slices of pizza (¼ of the pie), how much will you get from each of the food groups?

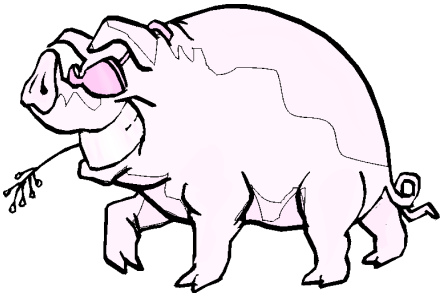
Grains _____
Vegetables _____
Fruits _____
Milk _____
Meat and Beans _____

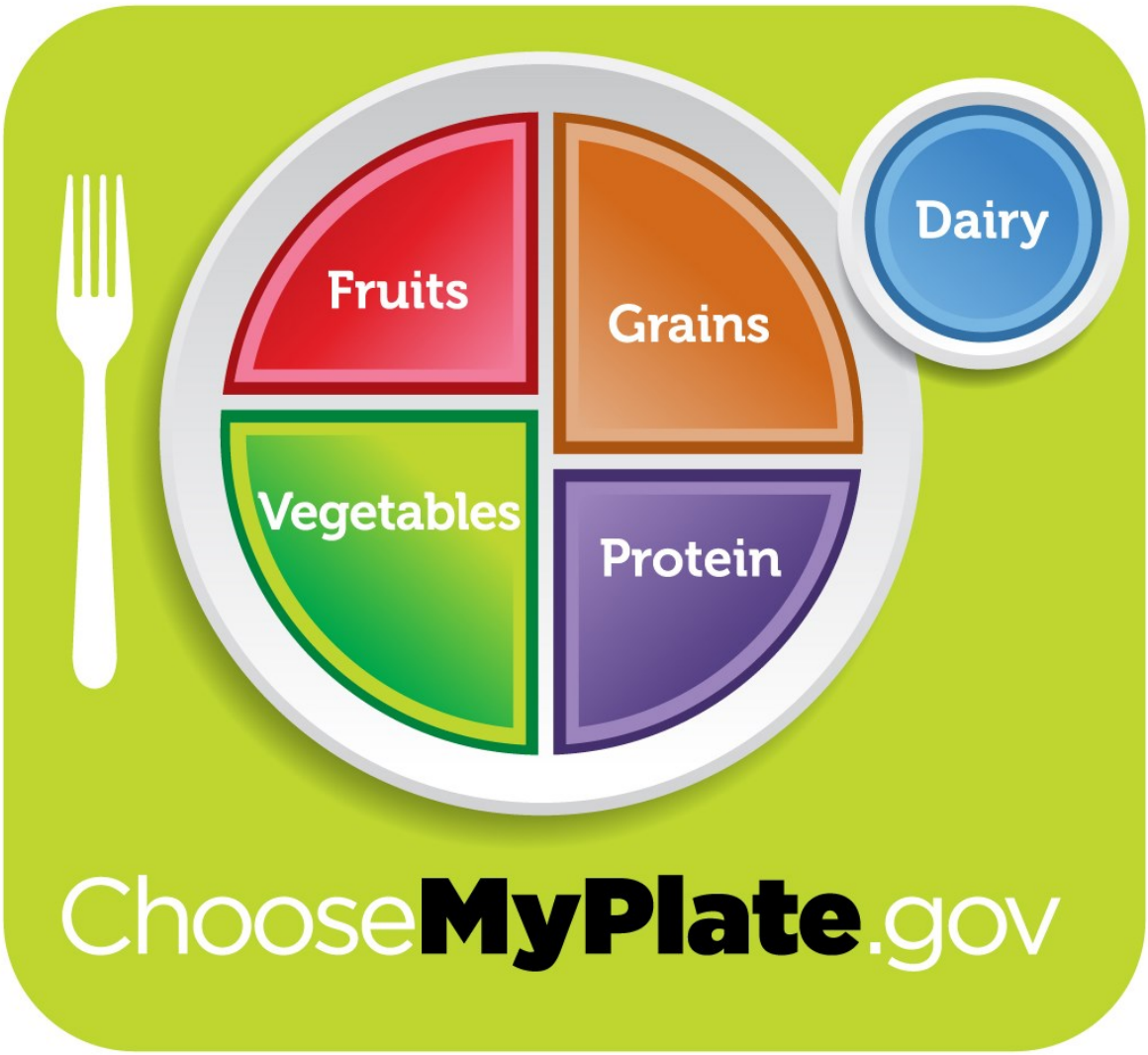
How much food do you need each day from each food group to make your plate complete?

Grains _____
Vegetables _____
Fruits _____
Milk _____
Meat and Beans _____








Fruits
Grains
Dairy
Vegetables
Protein
ChooseMyPlate.gov



Got Cheese?



Goals and Objectives:

- Students will gain a basic understanding of what the Nutrition Labeling and Education Act of 1990 requires on food packaging labels.
- Students will gain a basic understanding of the fat content in the foods they eat containing cheese.
- Students will gain visual knowledge of fat content in certain foods.
- Students will combine knowledge from the previous lesson's Food Pyramid activities and the Food Labeling Activity, then display this knowledge through oral communication.

MAIN IDEA:
Nutritional labels help us to make good food choices.

GRADES: 3-5

LIFE SKILLS:
Healthy lifestyle choices

SUBJECT AREAS:
Health
Language Arts

STANDARDS:
Located in Appendix C

DURATION:
30-40 minutes for each activity

SETTING:
A comfortable room with tables and chairs

SUPPLIES:

- Mozzarella Cheese Please! activity sheet (master enclosed, one copy per student)
- Got Cheese game cards (set enclosed)
- Can of shortening
- Measuring teaspoon
- MyPyramid Poster (see Lesson 3)

Background Information

In 2007, Florida had 118,000 cattle on 144 dairies, which averages 819 cows per dairy. The majority of the dairies are located in three counties in Florida – Okeechobee, Gilchrist, and Lafayette. So, the Florida dairy industry plays a big role in providing milk products, which are needed to make the cheese on our pizzas.

Traditionally, cheese was made as a way of preserving the nutrients of milk. Cheese is the fresh or ripened product obtained after coagulation and whey separation of milk, cream, partly skimmed milk, buttermilk, or a mixture of these products. Basically, cheese is the selective concentration of milk. Thousands of varieties of cheese that are characteristic of different regions of the world have been created.

The "Got Cheese" lesson focuses on food labels and the fat content of foods that children commonly eat that contain cheese. The following is information to help the teacher become more prepared for this lesson.

Food Labeling:
In 1990, the Nutrition Labeling and Education Act went into effect. This was established to help the consumer have useful information about the food that they eat. According to this act, all food labels must contain the following information:

- Common name of the product
- Name and address of the product's manufacturer
- Net contents in terms of weight, measurement, or count
- Ingredients List - Lists the ingredients in descending order of predominance and weight
- Serving Size - Identifies the serving size and servings per container
- Nutrition Facts - Includes the quantity of nutrients for one serving.

Fat Content in Cheese

The type of foods we eat that contain cheese can really change the fat levels we consume. Pizza, like many other foods with cheese, is a healthy choice if eaten in moderation. Many people just see cheese as a high fat food, but it has a lot of nutritional value. Cheese, because of the source of calcium it provides, is very beneficial to youth.

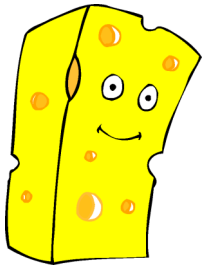
The energy needs of children vary largely to growth rate, activity level, and body size. Most school-aged children need about 1,600 to 2,200 calories per day. No more than 35% of these calories should come from fat. For children who need 1,600 calories, that's about 54 grams of fat. As the students are discussing the grams of fat in items after playing the "Got Cheese" game, explain these caloric and nutritional needs to them.

Introductory Activity

Start out by asking the students the following questions:

- What is your favorite type of cheese?
- What kinds of food do you eat cheese on/in?
- Do you ever think about the amount of fat in the types of cheese you eat?

Explain the requirements of the Nutrition Labeling and Education Act of 1990 with students by reviewing the label of mozzarella cheese.



Have students complete the nutritional labeling worksheet, "MOZZARELLA CHEESE PLEASE!"

"Got Cheese" Activity

1. Divide the class into two teams and give each team a set of "GOT CHEESE" CARDS. (Appendix A, you can determine the number of cards you want to use for the game.)
2. Explain that the goal of this exercise is to decide as a group which food containing cheese has the least amount of fat first, continuing until they reach the food highest in fat.

Let's Think About It...

Have the two teams compare their results.

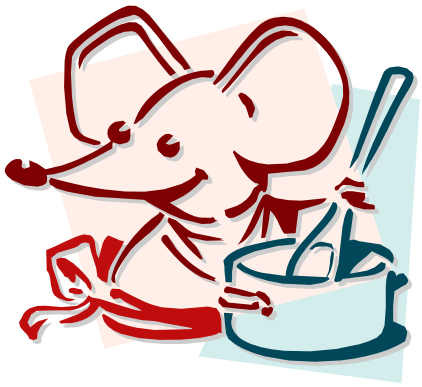
- Did the two teams line up the cheese cards in the same or different order and why?
- How did they make their decisions?
- Were there any clues that helped them determine how much fat was in foods?

Answers for "Got Cheese" Activity

<u>Least to most fat content</u>
(different brands and recipes vary, so these are the average amounts of fat for these foods)

1. 1 cup of low fat (1%) cottage cheese with fruit - *2 .5 grams*
2. 10 cheddar snack crackers - *4 grams*
3. 1 slice (1/8 of a 12 inch pizza) homemade cheese pizza - *5.5 grams*
4. 1 slice (1/8 of a 12 inch pizza) fast food cheese pizza - *8 grams*
5. 1 ounce (size of two dominos) cheddar cheese and an apple - *.5 grams*
6. 1 slice (1/8 of 12 inch pizza) fast food pepperoni pizza - *11 grams*
7. 2 tablespoons of cream cheese on a bagel - *12 grams*
8. 1 beef with cheddar hotdog - *13 grams*
9. 1 cheeseburger (6 oz) - *14 grams*
10. 8 cheese ravioli - *15 grams*
11. 2 tablespoons of blue cheese dressing on salad - *16 grams*
12. Macaroni and cheese (1 cup) - *20 grams*

Taking It a Step Further...



1. Ask a student to be a volunteer to assist you in the next activity. Tell the class that you are going to choose one of the food items from the cards and the volunteer will measure out the teaspoons of fat that one serving of the food contains.
2. Don't let the class know, but select the macaroni and cheese. **Four grams of fat is equal to one teaspoon of shortening**, so have the volunteer scoop out 5 level teaspoons of shortening. Explain the fat gram and teaspoon conversion to the students.
3. Have the class guess which food item you selected.
4. Now choose an alternative food (ex., slice of cheese pizza) with less fat. Again, have the volunteer measure the shortening (2 teaspoons) ask the class to guess.

Let's Think About It...

- Which of these choices means less fat in our diet?
- What are some other healthy alternatives?
- Were you surprised that pizza could be a healthy food choice?
- Which food's fat content surprised you the most?
- Why is it important to read food labels?
- What changes will you make in your diet after playing "Got Cheese?"

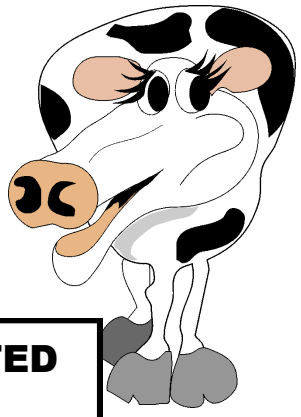


Reflect back to MyPlate and the point of using fats and oils sparingly. Remind them that if they need 1600 calories per day they need no more than approximately 54 grams of fat per day in their diet.

Let's Apply...

Have the students select a food product from home with a food label and create a 15-30 second commercial convincing the class why consumers should buy this product. Students are to use the label information and the knowledge they gained from the MyPlate activities.

Mozzarella Cheese Please!



Nutrition Facts		
Serving Size 1 oz (30g)/ 1 inch cube		
Servings Per Container about 8		
Amount Per Serving		
Calories 80	**Calories from Fat 50**	
		% Daily Value*
Total Fat 6g		9%
Saturated Fat 4g		20%
Cholesterol 15 mg		5%
Sodium 100 mg		4%
Total Carbohydrate 1g		0%
Fiber 0g		
Sugars 6g		
Vitamin A 4%	Vitamin C	0%
Calcium 15%	Iron	0%
***Percent Daily Values (DV) are based on a 2,000 calorie diet.**		

KEEP REFRIGERATED

INGREDIENTS: PASTERIZED PART SKIM MILK, CHEESE CULTURES,VINEGAR,SALT, AND ENZYMES.

4-H CHEESE CO, INC.
LARGO, FLORIDA 33774
PLANT NO. 4-H 4U



Nutrition Label is based on part skim mozzarella cheese.

1. How many calories are there in 2 servings of mozzarella cheese? _____
2. How much saturated fat is in 3 servings of mozzarella cheese? _____
3. What is the name of the product's manufacturer? _____
4. How much sodium is in a 1/2 serving of mozzarella cheese? _____
5. In order to get 100% of your needed Vitamin A for the day, how many pieces of mozzarella cheese would you need to eat? _____
6. How many servings are in this package of mozzarella cheese? _____



Project Herb

MAIN IDEA:
Herbs and spices are agricultural products used daily.

GRADES: 3-5

LIFE SKILLS:
Cooperation

SUBJECT AREAS:
Science
Mathematics
Social Studies
Language Arts

STANDARDS:
Located in Appendix C

DURATION:
This unit will probably require 1 week to complete but can be extended or shortened according to how it is utilized.

SETTING: Indoors; classroom with desks or tables

LESSON SUPPLIES:
- Computer with Internet connection and printer for each group.
- Computer-based presentation software. (optional)
- Poster boards, pencils, markers, crayons, scissors, (for oral presentation display)
- HERB & SPICE CHART (Appendix A)
- World map
- Distance Table (Appendix A)

- Students will gather information about the difference between herbs/spices, their origin, appearance, smell, taste, uses, and how they are grown or cultivated, students will record what they learn on an Herb/Spice Chart.
- Students will utilize the Internet to gather information about herbs/spices and record the information that is necessary for this unit.
- Students will locate herbs/spice origins on a world map and label the map.
- Students will find the distance from their school to the origin of the herb/spice.
- Students will design a computer-based or oral presentation that will teach the audience what they have learned about their assigned herbs/spices.
- The class will work together in cooperative groups to accomplish most of the tasks.
- The class will then decide what herbs/spices are used in making pizza sauce.

Suggestions Before Beginning Lesson:

1. Have class/group discussion after each step in the process. This will help students organize their thoughts and check for understanding.
2. Bring in or have students bring in herbs/spices that they might already have in their kitchen.
3. Bring in books and photographs of herbs/spices.



1. Students will be placed or group themselves depending on class size (recommend 3 to 4).
2. Students will choose or be assigned 3 or 4 herbs/spices from the Herb/Spice List provided below.
3. The students will access information from books and the Internet about the aspects of herbs/spices they are studying and record their information on the HERB/SPICE CHART.
4. Next, each group will determine the distance of the origin of their assigned herbs/spices from their school, using the Internet and map legends to fill in the DISTANCE TABLE.
4. Then, each group will mark the origin of their herbs/spices on a printed WORLD MAP.
5. Once all the research has been completed, each group will make an oral presentation on the information they have gathered in their group.
6. Class will then decide what spices/herbs they think a Pizza Chef would use in their pizza sauce.



Let's Think About It and Apply:

1. Investigate other ways agricultural herbs/spices are used.
2. Post charts, tables and maps in classroom for children to view.
3. Discuss herbs/spices after the presentations and decide as a class which ones would be most likely the ingredients in a Pizza Chef's recipe.

HERB & SPICE LIST

Allspice	Garlic	Tarragon
Anise	Ginger	Thyme
Basil	Mace	Turmeric
Bay Leaf	Marjoram	
Cayenne	Mint	
Celery Seed	Mustard Seed	
Chervil	Nasturtium	
Chili Powder	Nutmeg	
Chives	Oregano	
Cilantro	Paprika	
Cinnamon	Parsley	
Clove	Poppy Seeds	
Coriander	Rosemary	
Cumin	Saffron	
Curry	Sage	
Dill	Savory	
Fennel	Sesame	

"Can You Top This?"



Main Idea:
A good consumer compares products before purchasing.

Life Skills:
Acquiring, analyzing, and using information for decision-making

Grades: 3-5

Subject Areas:
Social Studies
Language Arts
Mathematics

Standards:
Located in Appendix C

Duration:
30-40 minutes

Setting:
A comfortable room with tables and chairs

Supplies:
Can You Top This? activity sheet (1 per group of students)

Goals and Objectives:
- Students will understand what it means to be a good consumer.
- Students will use math to calculate cost differences.
- Students will be able to make decisions through data analysis.

Background Information

Early in the sixteenth century, settlers brought cattle and swine to the United States from Europe. The founding of St. Augustine, Florida in 1565 was the beginning of North America's first farms and ranches. Today, Florida ranks tenth nationally in the number of beef cows with over 900,000 cows and has some of the nation's largest cattle ranches. Swine are also raised in Florida for pork production, but that industry has been on a decline to an all-time low. Beef and pork are two of the most popular meats used to make our pizza toppings. We get ground beef from beef cattle, and pepperoni, sausage, ham, and bacon from pigs.

Introductory Activity

1. Begin this lesson by distributing the "Can You Top This" Homework Activity Sheet. Review the Class Pizza Party Problem and then discuss the following questions:
   - What is a consumer?
   - What does it mean to be a good consumer? (quality, quantity, and price should be discussed)
   - What are some factors that would affect the price of meat? (Hint: have them think back to first activity…cost of production)
     Examples:
     - If the cost of feed for animals increased, would the prices for bacon, ham, and ground beef increase too?
     - Could a drought affect the prices of your favorite meat?
2. Next divide your class into five groups. Assign each group one of the following meats: bacon, ham, sausage, pepperoni, and ground beef. For homework the students need to find out approximately how much per pound their assigned meat cost. Half of each group should be assigned to call or visit a butcher shop and the other half of each group should be assigned to call

or visit a supermarket for the price per pound. In order to do this the class needs to develop a script, so they can be the ultimate professionals when they request their information.

"Can You Top This?" Activity



At this time, all the groups should have obtained their pricing information. Have the groups get together and share their results with each other. Using the "CAN YOU TOP THIS" GROUP REPORT FORM, they need to fill in the cost form for their group, and then average their numbers (depending on the level of youth, you may have them round the total number before dividing). It is estimated that they will need two pounds of meat for all the pizzas, so they need to calculate this figure on their worksheet.

1. Have each group put the result on the board to share with the class. Have the class decide which is the least expensive meat for their pizza.

2. Have the class take a survey by secret ballot for which of the five pizza meat toppings they like the best. Compare the survey results with the economic results of the previous activity.

Let's think About It...

Generate discussion with the following questions:

- Is the cheapest option always the best one to pick?
- What if most people don't like the cheapest meat selected?
- Were you surprised how much meat cost?
- Is the butcher or supermarket more expensive?
- Did different supermarkets charge the same amount for the same type of meat?
- Why do you think the cost are different/similar at the places you called/visited?

Let's Apply…

Apply the knowledge you just learned by going or thinking back to food shopping with your parents and answering the following questions:



- When your parents shop do they compare prices?
- What items did they spend the most time comparing?
- Were there any items they did not compare? Why or why not?
- As youth, in what ways could you comparison shop?
- Why do you think your parents say you cannot have certain items in the supermarket?
- Why is it important to compare prices?

"Can You Top This?"



Class Pizza Party Problem

The class wants to have a pizza party, but you want to spend as little as possible so you can save the rest for a class trip. The teacher has already purchased a lot of the supplies, such as the pizza dough, tomato sauce, and the cheese. The class decides that they want more on their pizza than just cheese. They also want a meat topping. The class needs to be good consumers and figure out which meat topping is the best buy.

Record Your Group Members' Names:

_____ _____

_____ _____

_____ _____

Which meat was your group assigned? (circle one)

Bacon Ham Sausage Pepperoni Ground Beef

Which store were you assigned to research? (check one)

_____ Supermarket:_____
(name of store)

_____ Meat marker/Butcher Shop: _____
(name of store)

Assignment: Research the assigned store to find out the cost per pound of your meat. You may visit, call, or look at store advertisements to gather information.
Write your "script" here for calling:

What was the cost per pound? _____
Record the name of the store you researched above.
Which method did you use for your information: (check one)
Called ____ Visited Store:_____ Used Store Ads:_____

"Can You Top This?"

Group Report

Record the price for each group member and calculate the average cost per pound. Report your findings to other groups in class. Now, record each groups findings for the different meats you can use for your class pizza.

Group Member	Price at Supermarket	Price at Butcher Shop
1.		
2.		
3.		
4.		
5.		
AVERAGE PRICE:		

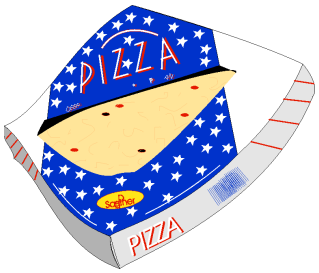
Based on the average prices, how much would 2 pounds of your meat cost?

Supermarket	Butcher Shop

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Lesson 7

"There's a Tree in My Pizza?"



Goals and Objectives:

- Students will use creativity and innovation to develop a new packaging concept.
- Students will present an original idea to the class.
- Students will construct and give a survey to classmates.
- Students will combine and analyze survey results to form a conclusion.

MAIN IDEA:
Food packaging can depend on agricultural products.

GRADES: 3-5

LIFE SKILLS:
Wise Use of Resources

SUBJECT AREAS:
Visual Arts
Language Arts

STANDARDS:
Located in Appendix C

DURATION:
30-40 minutes for each activity

SETTING:
A comfortable room with tables and c

SUPPLIES:

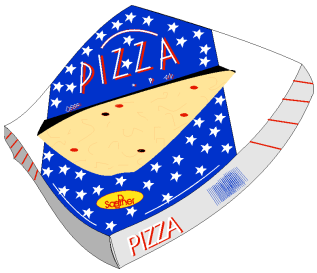
- A pizza
- Basic aft s
  to crea

Background Information

Every year in the United States, each person uses enough tree products to make up about 100 feet tall and 16 inches in diameter worth of trees. The forest industry brings in over one billion dollars to the economy each year. The pizza box is just one of 5,000 products that come from trees.

Did you know...?

- Florida has 35 million acres of land. About 16 million of these acres are commercial forestland. The remaining land is used for crops, pastures, ranges, cities, roads, airports, etc.
- Floridians are employed in over 90,000 jobs in the forest industry.
- Ten new trees are planted by forest landowners for each Floridian each year.



Introductory Activity

y the students a pizza box. Ask them how a p a box could be related to agriculture. izz hat is delivered to your home arrives in and the pizza from the supermarket is lly plastic shrink-wrapped and then kaged in a box. Discuss if the students have ever thought a better way to package pizza?

tudent needs to think of a new way to package a pizza and raw is or her idea on paper. Keep in mind size, shape, cost, eye appeal, and the environment. Also take in ideration the storage space it would take up on the supermarket shelf, in a person's refrigerator, or in pizza delivery person's vehicle.

4. Have each youth share their design with the class to include the key features of their new packaging.

"There's a Tree in My Pizza" Activity



1. Now that all the students have had the chance to see all the designs, it is time for the inventors to conduct a survey for the packaging design. Each student needs to interview five other students by asking them 2 to 4 survey questions of their choice. They can ask questions such as, "Would you buy a pizza in this packaging" and "What is your opinion on the color of the packaging." Depending on grade and ability level, students can design "yes or "no" questions or questions that require a one sentence or word answer.

2. Each student then needs to analyze their five surveys and make a conclusion on whether or not their packaging design is something people want to use.

Let's Think It Over...

- What are the pros and the cons to the environment for each type of packaging?
- Did you think about the environmental aspects when you designed/voted for the packaging?
- What did you consider when you designed/voted for the packaging?
- Is the best looking packaging always the most environmentally sound?
- Was the packaging that was chosen environmentally friendly?
- When you buy food does the packaging make you want to buy one item over another? What is an example?
- Why is the type of packaging important?

Let's Apply...



Let's see if you are a good tree consumer by doing the following:

- As a class, develop a list of all the tree products you use in your daily life.
- For the next two days anytime you use any tree product write it down in your notebook. At the end of two days add up the number of times you used a product from a tree.

Add up the total number of times tree products were used for a class total and discuss the following:

- What was your total as a class?
- Did writing down the tree products you were using make you use less of them? Why or why not?
- What could you do to be a better "tree consumer"?
- What could the class as a whole do during the school day to make you a better "tree consumer"?



Leaning Tower of Pizza



Goals and Objectives:
- Students are aware of pizzas from other countries and the history of pizza.
- Students will create a bar graph to determine favorite pizza toppings.
- Students will plan and create a menu.

MAIN IDEA:
Pizza is a favorite food in many different cultures.

LIFE SKILLS:
Cultural differences
Group decision making

GRADES: 3-5

SUBJECT AREAS:
Social Studies
Language Arts
Visual Arts
Mathematics

STANDRADS:
Located in Appendix C

DURATION:
30-40 minutes to complete each activity

SETTING:
A comfortable room with tables and chairs

SUPPLIES:
- Leaning Tower of Pizza handout (1 per student)
- Ingredients for English muffin pizzas

Background Information

Did you know that the modern pizza was named after the queen of Italy, Queen Margherita? For many centuries the pizza was considered a peasant's meal, but in 1889, a baker named Raffaele Esposito of Napoli (Naples) put pizza on the map.

Raffaele Esposito created a special pizza named "Pizza Margherita" for the visiting king and queen of Italy, which resembled the Italian flag with its colors of red (tomato), white (mozzarella), and green (basil). The king and queen enjoyed the pizza and gave the pizza an A++, which set the standards by which today's pizza began.

The original pizza was made up of three main parts: the bread, the sauce, and the cheese. Toppings were added many years later. The Greeks were the first people to think of using bread as a plate. Their pizza was a flat round bread (plankuntos) with a variety of toppings. The tomato came to Italy from Mexico and Peru by way of Spain in the sixteenth century. First it was used as an ornamental plant, then later as a vegetable used in cooking. The cheese, which is usually mozzarella, was made from the milk of water buffalo that was sent to Campania from India in the 7th century.

A pizza shop is also called a *pizzeria.* The first known pizza shop, called "Antica Pizzeria Port 'Alba" in Naples, has been open since 1830. That means it has been open for more than 180 years! The Italians were the first to introduce pizza to America. Gennaro Lombardi opened the first pizza shop in the United States in 1895 in New York City. However, the pizza did not become popular in the U.S. until the soldiers returning from World War II created a nationwide demand for the pizza that they had eaten and loved in Italy. Because of the growing sales and popularity of pizza, two major pizza stores opened in the United States. In 1958, Pizza Hut opened its first store in Kansas, and in 1960, Dominos opened up its doors in Detroit.

Today pizza is not limited to the flat round type, but come in many different varieties and shapes. For example, there is deep-dish, pizza pockets, pizza-on-a-stick, pizza turnovers, rolled pizza, and pizza strudel, all with different combinations of toppings, sauce, and cheese.

Leaning Tower of Pizza Introductory Activity

1. Have each student read the LEANING TOWER OF PIZZA HANDOUT.
2. Discuss that pizza, especially the topping selections, is different in other countries. Ask the youth why they think pizzas are different in other parts of the world. Does it have to do with culture or likes and dislikes?
3. Have each student select a country from the list below (you may add others to this list) and have them write a description of pizza from that country. They should include the type of bread/dough used, type of cheese, and what toppings are typical.

Let's Think About It and Apply…

Have each youth describe their pizza, then discuss:

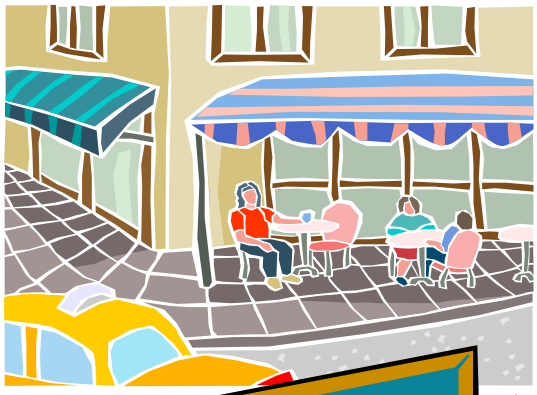
- What country's pizza do you think would taste the best?
- Why do people from other countries or cultures eat different types of foods?
- Why is pizza such a popular food in the United States?
- Do you think people from other countries would like our pizza? Why or why not?
- Does your family eat foods native to the country of your ancestors?

International Pizzas

The typical pizzas are listed in italics to help the teacher.

India	*pickled ginger pizza, minced mutton pizza, tofu pizza*
Japan	*squid pizza, eel pizza, "Mayo Jaga" (mayonnaise, potato, and bacon) pizza*
Brazil	*green pea pizza*
Russia	*Mockba (sardines, tuna, mackerel, salmon, and onions) pizza, red herring pizza*
France	*Flambee (bacon, onion, and fresh cream) pizza*
Pakistan	*curry pizza*
Australia	*shrimp and pineapple pizza, barbecue pizza*
Costa Rica	*coconut pizza*
Iceland	*greenhouse vegetable* pizza
Netherlands	*Double Dutch (double cheese, onions, and beef) pizza*
Saudi Arabia	*beef pizza*
Greece	*feta cheese and olives pizza*
Germany	*sauerkraut, ham, and onion pizza*
Guatemala	*black bean sauce pizza*
Indonesia	*shrimp, bean curd, mushrooms, and spicy sauce pizza*
Malaysia	*curry, mutton, and onion pizza*
Poland	*cabbage and sausage pizza*

Leaning Tower of Pizza Activity



Your class will be opening their own pizza restaurant! In order to open a restaurant several tasks need to be accomplished.

1. Decide what is the best location for the restaurant. Should it be in the classroom, the cafeteria, or even outside?

2. Design your pizza. The class needs to decide which of the following two toppings from the list below should be on the pizzas at their restaurant (your students may even have more ideas for good toppings).

   - First each student needs to make a list of the five toppings they would consider having on their pizzas.

   - Then the class needs to create a bar graph of class results to see which are the five favorite toppings.

   - Then select the two most popular toppings.

Green peppers	*Onion*	*Mushroom*
Black olives	*Pepperoni*	*Bacon*
Sausage	*Ham*	*Pineapple*
Ground beef		

3. Each youth needs to come up with an original restaurant name and create a menu that includes that name. The menu should include the pizza with the two toppings that will be available, plus beverage and dessert. A logo design should also be included on the menu.

4. Optional - After selecting the winning restaurant name/menu design, decorate your restaurant as a class for the pizza party.



Try this...

When your class has selected their toppings, it is time to decide where you can get your English muffins, tomato sauce, mozzarella cheese, and toppings. A local supermarket may donate them if you explain the purpose of the curriculum and how the knowledge that the students are gaining through these lessons affects their decision making about the food they buy. Another option is to have each student bring in an item.

English Muffin Pizzas

Ingredients
1/2 English muffin per student
2 Tbsp. of tomato sauce
2 Tbsp. of shredded mozzarella cheese
Pizza toppings

Preheat oven to 400 degrees for 10 minutes. Place split English muffins on a baking sheet. On each slice place the recommended amount of tomato sauce, cheese, and toppings. Place in the oven and cook for approximately 12 to 15 minutes or until cheese is melted. ENJOY!

Let's Think About It…



- Did most of the people in your class select the same five toppings?
- What method did you use as a class to select the top two toppings?
- Was selecting the top two as a class harder than selecting the top five yourself? Why or why not?
- How did you feel if your topping was not selected in the top two?
- Was the method for selection fair? Why or why not?

Let's Apply…

- What are other opportunities when the class could use this method for decision-making?
- What are other decisions you make with your friends or family where this method would be useful?

Try making English muffin pizzas at home and see what your family's favorite toppings will be. Demonstrate how to use this method for group decision-making!



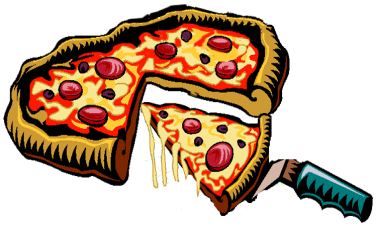


Think about this…

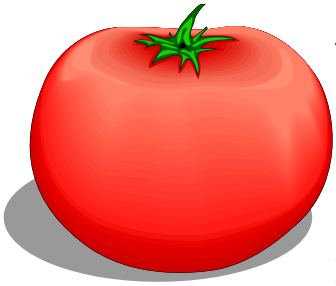
Food safety is an important issue to be discussed for any new restaurant. Most elementary school health books have a section on food safety. It is recommended that you do this lesson with your students at this time.

Leaning Tower of Pizza

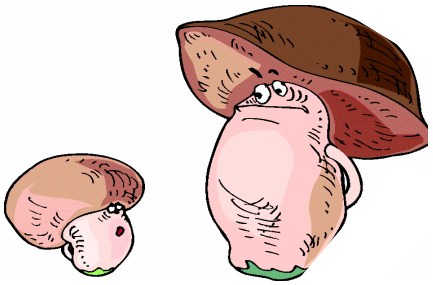
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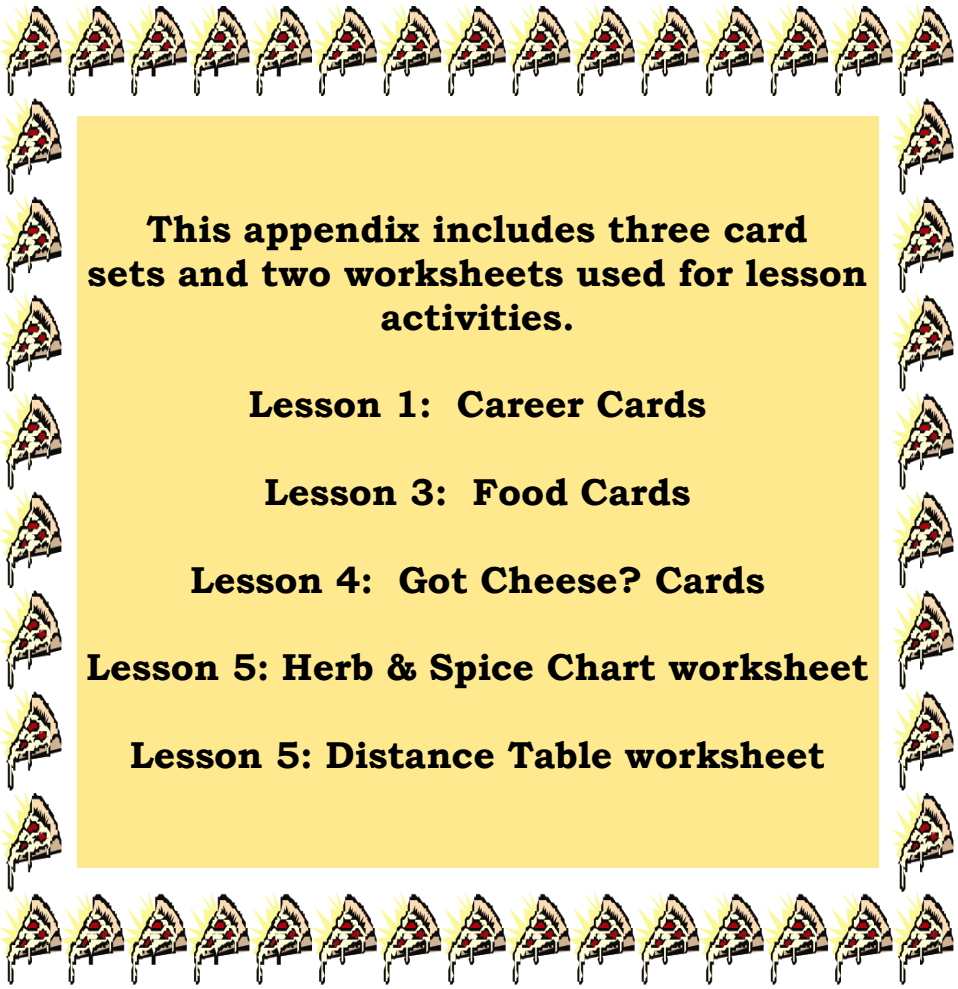
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Appendix A:



This appendix includes three card sets and two worksheets used for lesson activities.

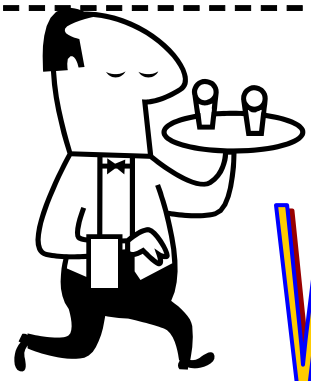
Lesson 1: Career Cards

Lesson 3: Food Cards

Lesson 4: Got Cheese? Cards

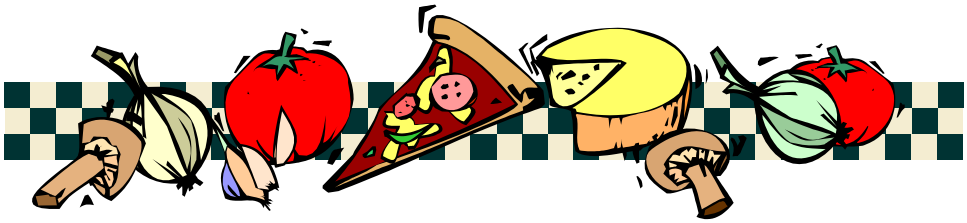
Lesson 5: Herb & Spice Chart worksheet

Lesson 5: Distance Table worksheet



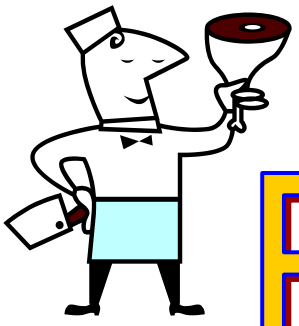
Waiter/Waitress

Pizza Chef



Family Consumer Science Professional





Butcher

Livestock Farmer



Trucker



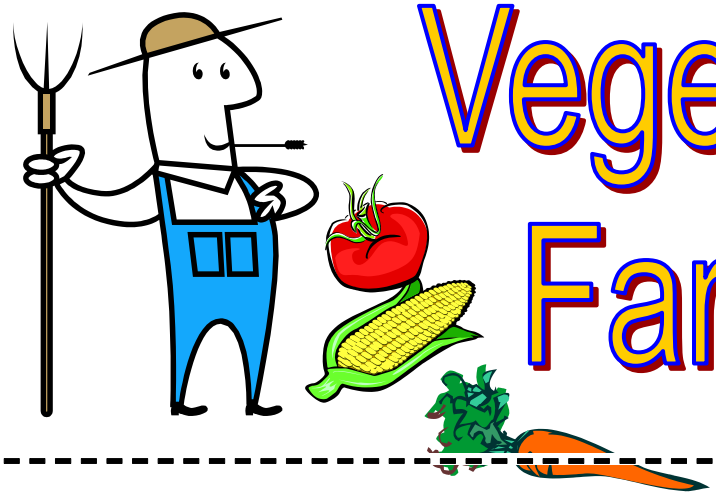
Crop Scientist



Grocery Store Manager



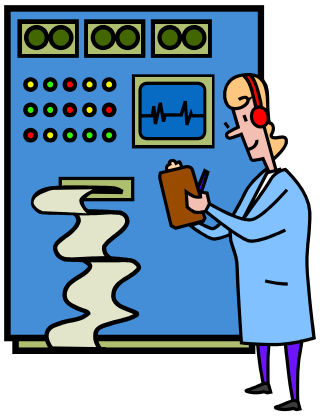
Vegetable Farmer

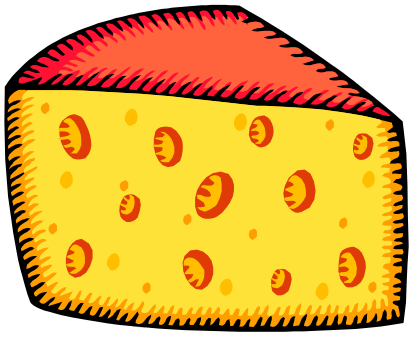




Nutritionist

Quality Control Worker





Cheese Processing Worker

Soil Scientist/ Specialist



Bakery Worker

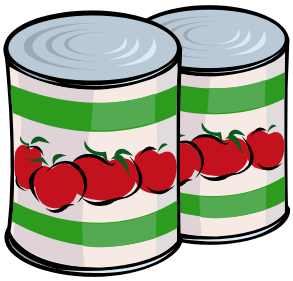




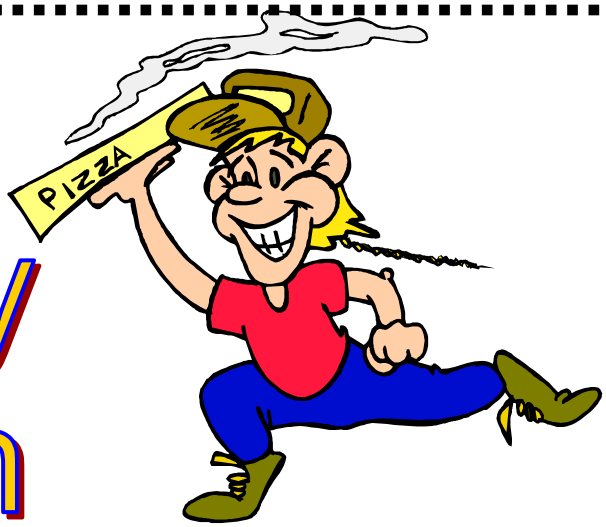
Dairy Farmer



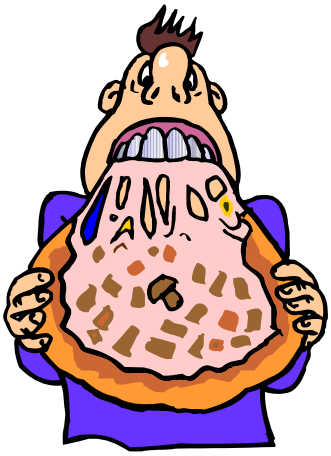
Vegetable Canner



Pizza Delivery Person



Pizza Eater



Warehouse Worker





Tree Cutter

Packaging Production Worker



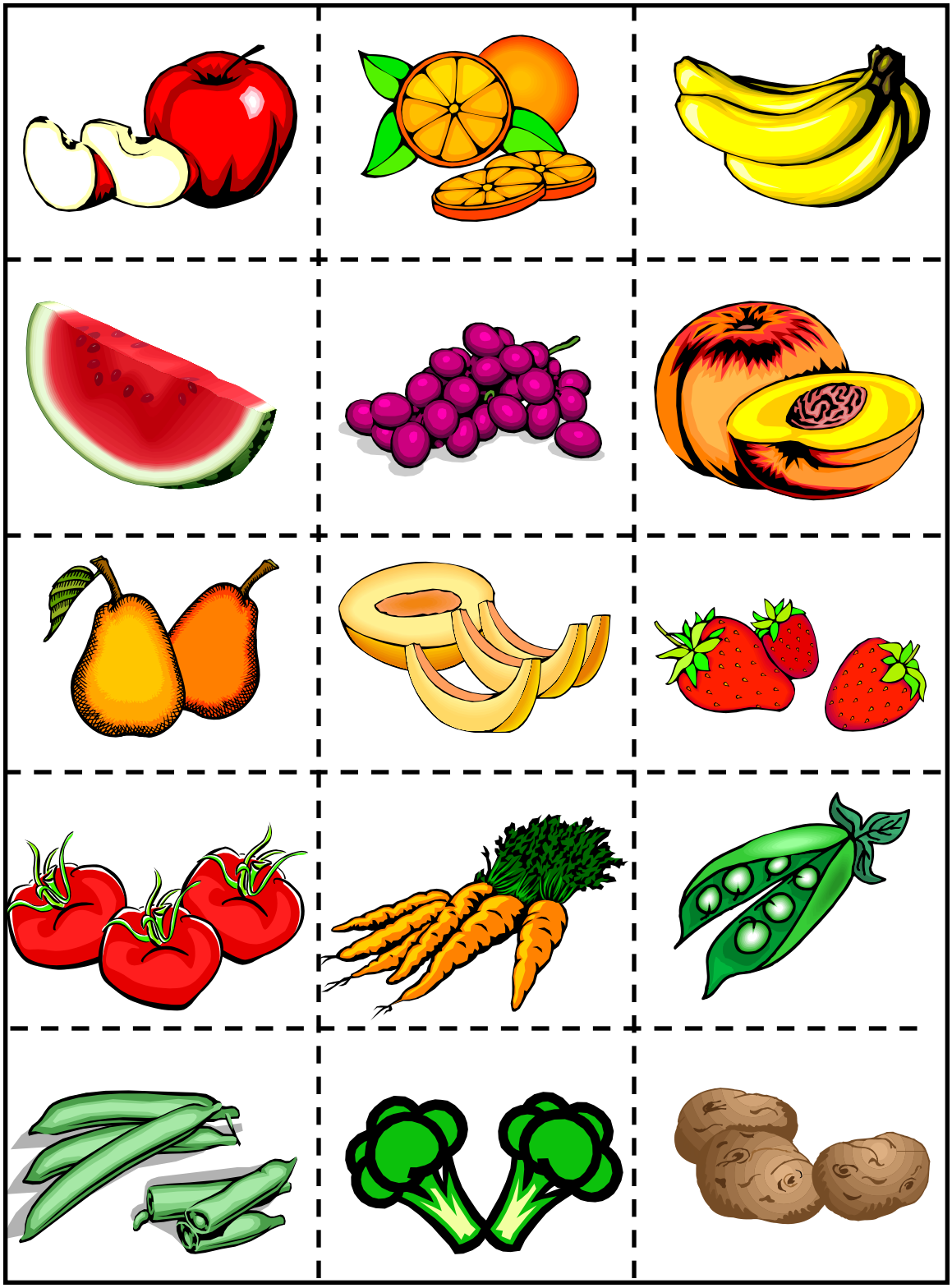
Fertilizer Plant Worker



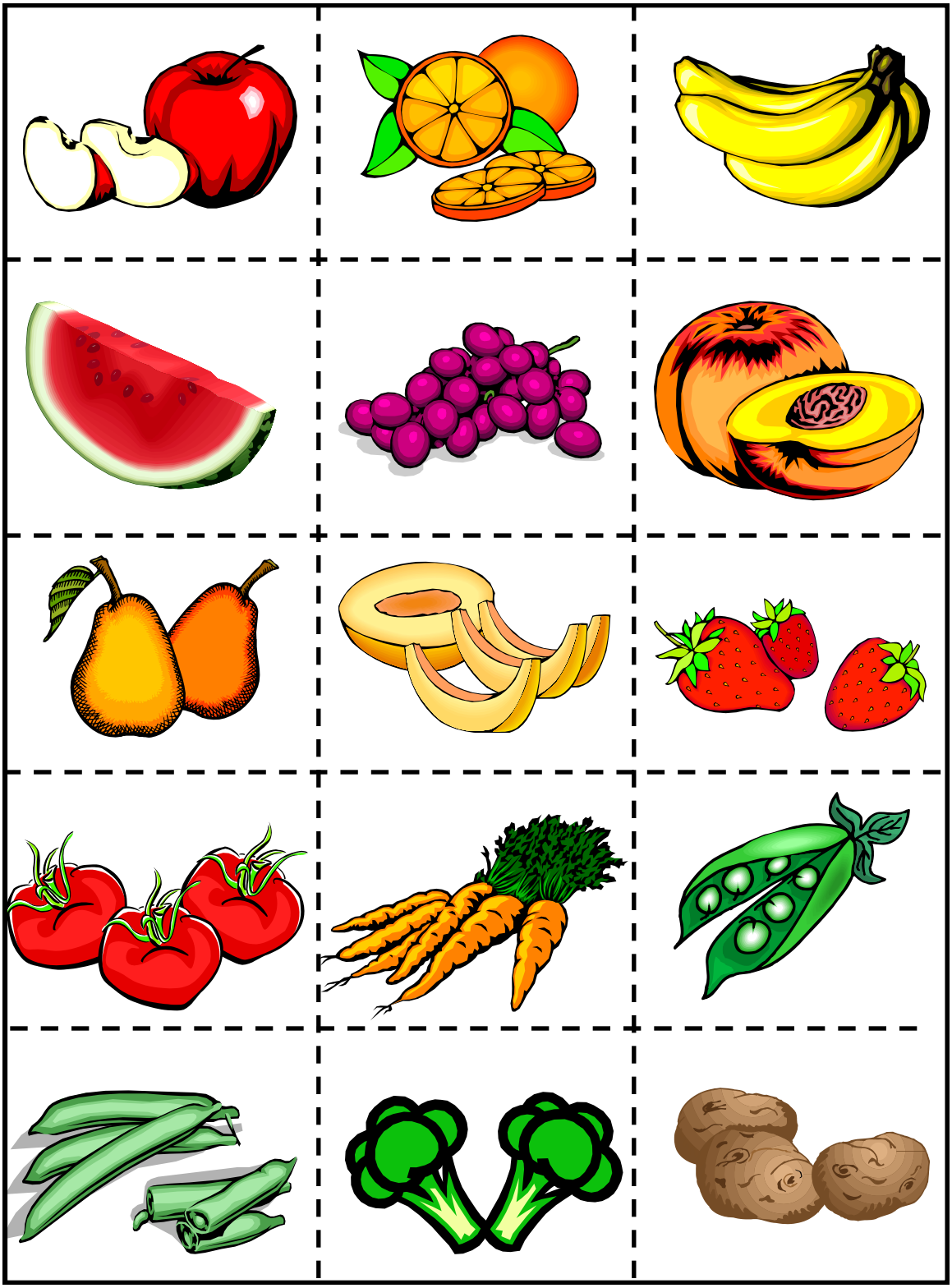
Grain Farmer



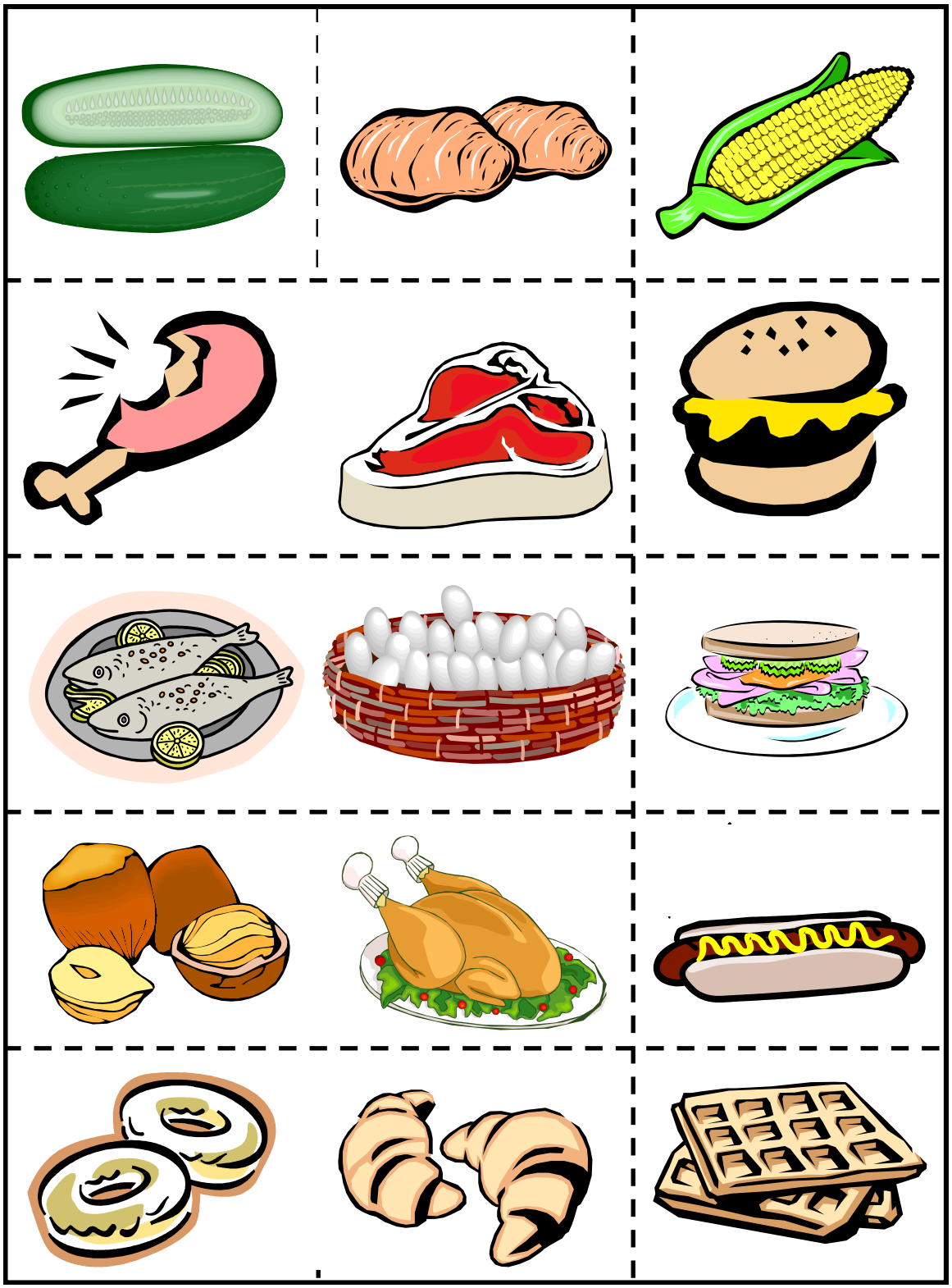
Food Cards



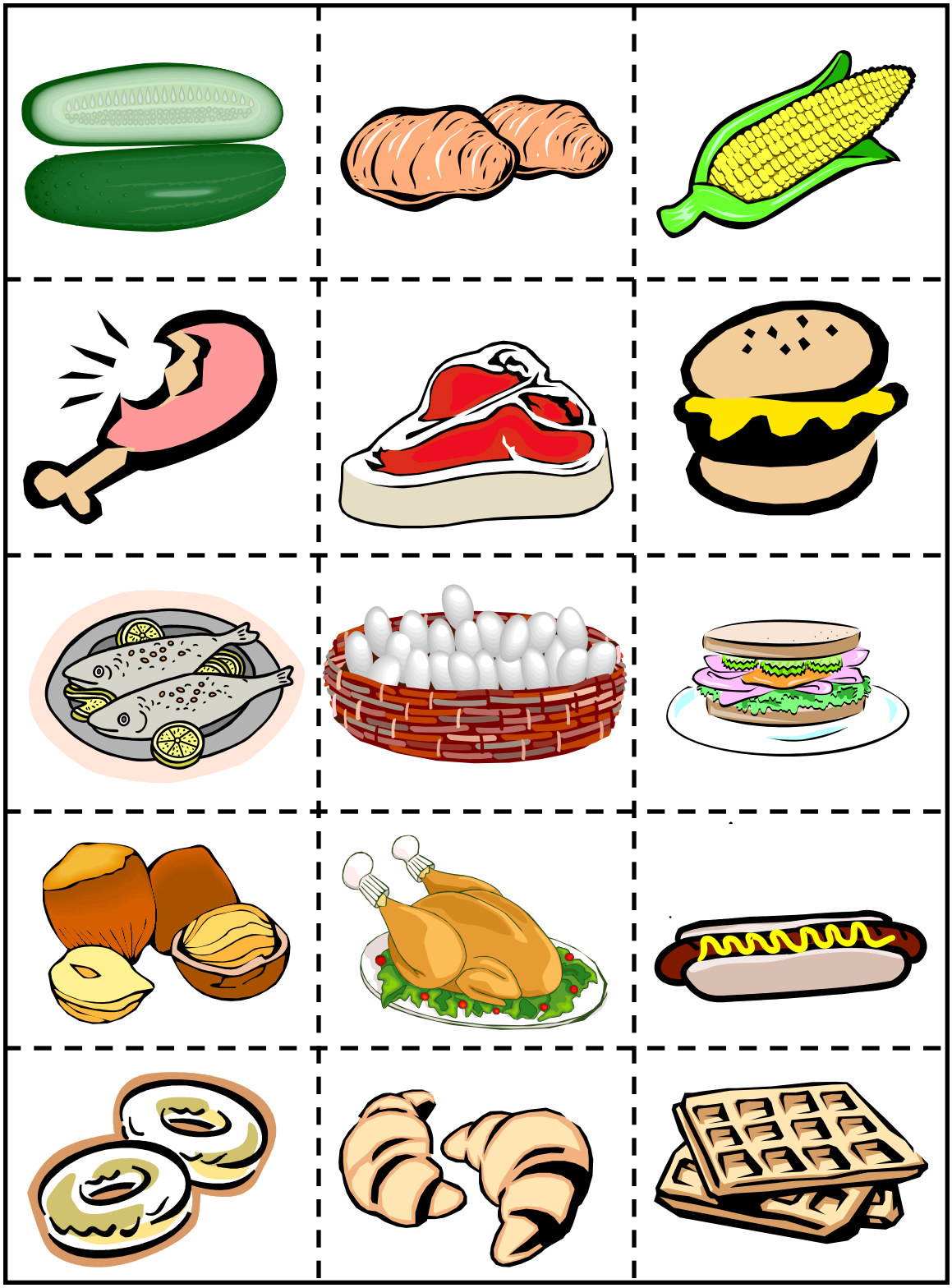
Food Cards



Food Cards



Food Cards



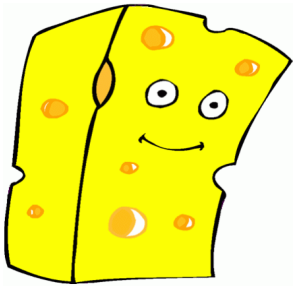
Food Cards



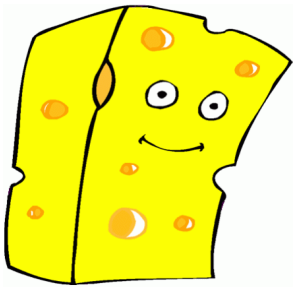
Food Cards



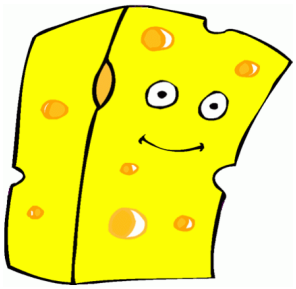
Got Cheese?



Got Cheese?



Got Cheese?

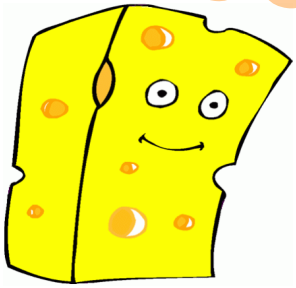


Cheeseburger

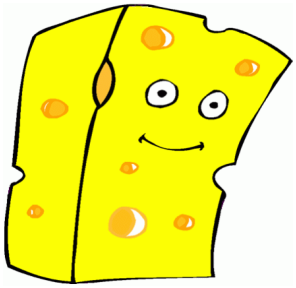
10 cheddar snack crackers

1 slice homemade cheese pizza (1/8 of a 12 inch pizza)

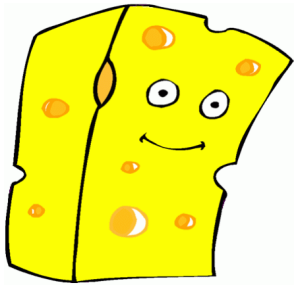
Got Cheese?



Got Cheese?



Got Cheese?

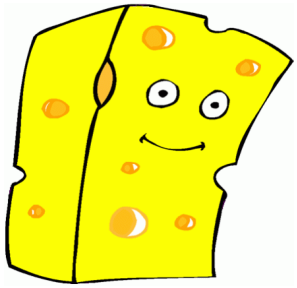


1 cup of low fat (1%) cottage cheese with fruit

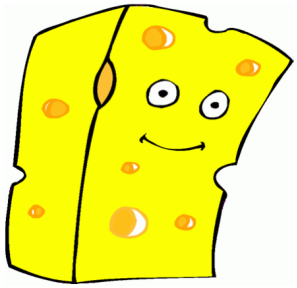
2 tablespoons of cream cheese on a bagel

1 ounce (size of two dominos) cheddar cheese and an apple

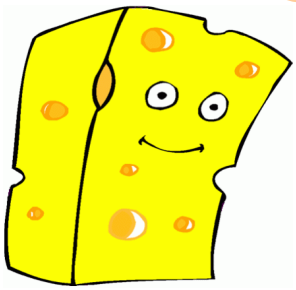
Got Cheese?



Got Cheese?



Got Cheese?

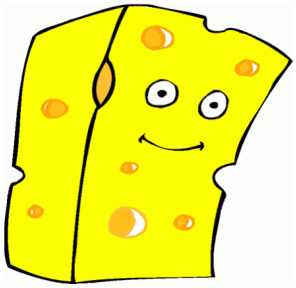


1 slice fast food
pepperoni pizza
(1/8 of 12 inch pizza)

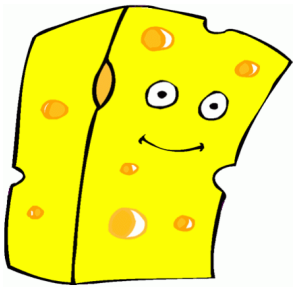
1 cup
macaroni and cheese

2 tablespoons of
blue cheese dressing
on salad

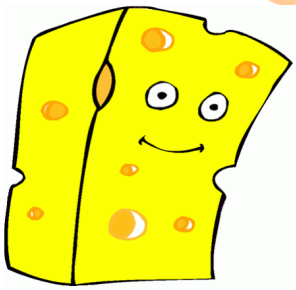
Got Cheese?



Got Cheese?



Got Cheese?



8 cheese ravioli

1 slice fast food
cheese pizza
(1/8 of a 12 inch pizza)

1 beef hotdog
with cheddar cheese

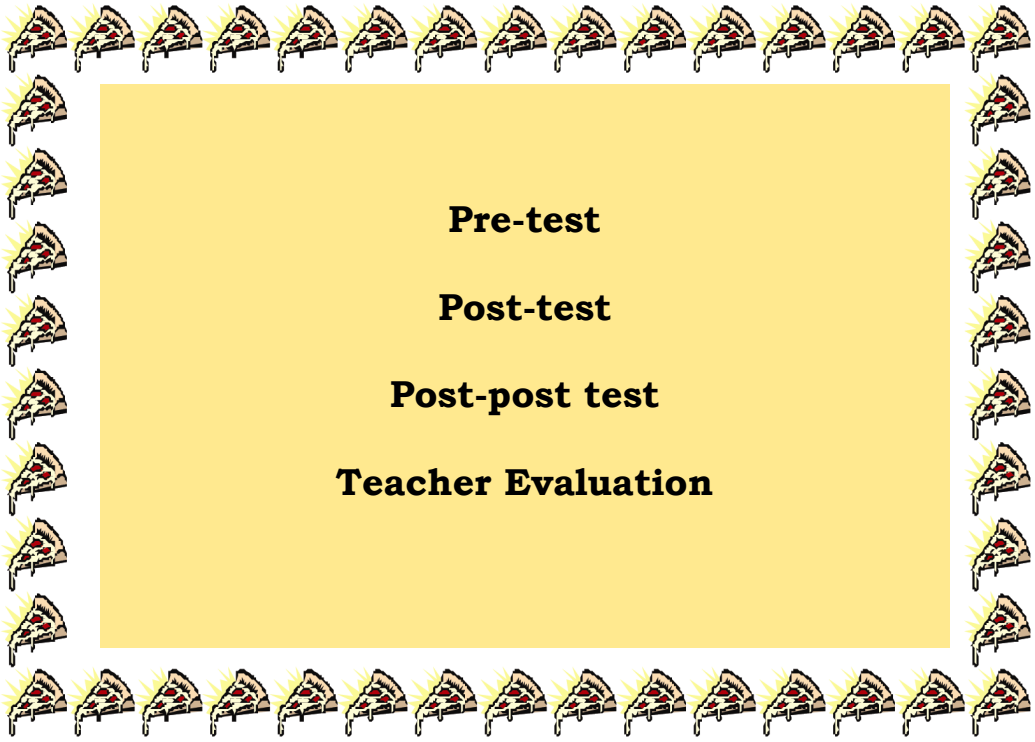
Herb & Spice Chart

Name of Herb/Spice	Type	Characteristics	Example Use

Distance Table

Name of Herb/Spice	Distance	Units

Appendix B:
Evaluation Tools



Student Evaluation (Pre-test)
4-H Pizza Garden: An Agricultural Adventure

First name _____ Last initial _____

School _____ Grade _____

Teacher's name _____

<u>This is not a test that will be graded.</u> Please answer the questions to the best of your ability.

1. Which of the following is a career in agriculture or the food industry?

a. truck driver
b. nutritionist
c. cheese processing worker
d. All of the above are careers in agriculture or the food industry.
e. B and C only are careers in agriculture or the food industry.

2 In what order does the food production process flow?

a. middlemen, consumer, and then raw goods producer
b. consumer, middlemen, and then raw goods producer
c. raw goods producer, middlemen, and then consumer
d. raw goods producer, consumer, and then middlemen

3. Which of the following foods are made from wheat?

a. wheat crackers
b. saltine crackers
c. wheat bread
d. All of the above are made from wheat.
e. A and C only are made from wheat.

4. Bran is part of the kernel of wheat.

True False

5. According to My Plate, how many servings of dairy products should you have each day?

a. 6-11
b. 2-3
c. 3-6
d. 5-10

6. Pizza can be included in a healthy well-balanced diet.

True False

7. The Food Label includes which of the following:

a. ingredients
b. serving size
c. nutrition facts
d. All of the above are included on the Food Label.
e. B and C only are included on the Food Label.

8. Which food contains the most fat?

a. pepperoni pizza (1 slice of a 12-inch fast food pizza)
b. macaroni and cheese (1 cup)
c. cheese pizza (1 slice of a 12-inch homemade pizza)
d. cheeseburger (6-ounce fast food burger)

9. The "herbs" used in pizza sauce come from:

a.) animals
b.) plants
c.) all of the above
d.) none of the above

10. It is always best to buy the cheapest item.

True False

11. The pizza box is made from a tree.

True False

12. After whom was the modern pizza named?

a.) queen of Italy, Queen Margherita
b.) the president of the United States
c.) the queen of England
d.) none of the above

Student Evaluation (Post-test)
4-H Pizza Garden: An Agricultural Adventure

First name _____ Last initial _____

School _____ Grade _____

Teacher's name _____

<u>This is not a test that will be graded.</u> Please answer the questions to the best of your ability.

1. Which of the following is a career in agriculture or the food industry?

a.) truck driver
b.) nutritionist
c.) cheese processing worker
d.) All of the above are careers in agriculture or the food industry.
e.) B & C only are careers in agriculture or the food industry.

2. In what order does the food production process flow?

a.) middlemen, consumer, and then raw goods producer
b.) consumer, middlemen, and then raw goods producer
c.) raw goods producer, middlemen, and then consumer
d.) raw goods producer, consumer, and then middlemen

3. Which of the following foods are made from wheat?

a.) wheat crackers
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c.) wheat bread
d.) All of the above are made from wheat.
e.) A and C only are made from wheat.

4. Bran is part of the kernel of wheat.

True False

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a.) 6-11
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d.) 5-10

6. Pizza can be included in a healthy well-balanced diet.

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True False

11. The pizza box is made from a tree.

True False

12. After whom was the modern pizza named?

a.) queen of Italy, Queen Margherita
b.) the president of the United States
c.) the queen of England
d.) none of the above

Student Evaluation (Post-post-test)
4-H Pizza Garden: An Agricultural Adventure

First name _____ Last initial _____

School _____ Grade _____

Teacher's name _____

<u>This is not a test that will be graded.</u> Please answer the questions to the best of your ability.

1. Which of the following is a career in agriculture or the food industry?

a.) truck driver
b.) nutritionist
c.) cheese processing worker
d.) All of the above are careers in agriculture or the food industry.
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a.) middlemen, consumer, and then raw goods producer
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d.) raw goods producer, consumer, and then middlemen

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10. It is always best to buy the cheapest item.

True False

11. The pizza box is made from a tree.

True False

12. After whom was the modern pizza named?

a.) queen of Italy, Queen Margherita
b.) the president of the United States
c.) the queen of England
d.) none of the above

4-H Pizza Garden: An Agricultural Adventure
Teacher Evaluation

School _____

Teacher_____ Grade_____

Number of students completing the curriculum by gender: Male _____ Female _____

Number of students completing the curriculum by race:
White _____ Black _____ American Indian _____ Hispanic _____
Asian _____ Other _____

Please rate the following statements on a scale of 1 to 5 by circling the appropriate number.

SA=Strongly Agree; A=Agree; N= Neutral; DA=Disagree; SD= Strongly Disagree

		SA	A	N	DA	SD
1.)	The lessons were correctly matched with the appropriate curriculum areas (i.e., Language Arts, Science, etc.)	1	2	3	4	5
2.)	There was enough useful background information at the beginning of each lesson to help the teacher.	1	2	3	4	5
3.)	The estimated lesson lengths were appropriate.	1	2	3	4	5
4.)	After completing the activities for each lesson with the students you felt that the goals and objectives for the lesson were reached.	1	2	3	4	5
5.)	The lessons were correctly matched with the Florida Sunshine State Standards (if applicable).	1	2	3	4	5
6.)	The life skills were reinforced through the learning experiences.	1	2	3	4	5
7.)	The curriculum lessons were laid out in an easy-to-follow format.	1	2	3	4	5
8.)	The Activity Sheets were at an appropriate level for elementary students.	1	2	3	4	5
9.)	The student lesson completion certificate was a useful tool for the students.	1	2	3	4	5
10.)	The evaluation tools were at an appropriate level for students.	1	2	3	4	5
11.)	You would use this curriculum with future students.	1	2	3	4	5
12.)	You would recommend this curriculum to other teachers.	1	2	3	4	5
13.)	The students were enthusiastic and enjoyed the lessons.	1	2	3	4	5

Please list any specific successes or benefits derived from this curriculum.

What could be done to improve this curriculum?

What is your overall evaluation of the program?

Excellent Good Fair Poor

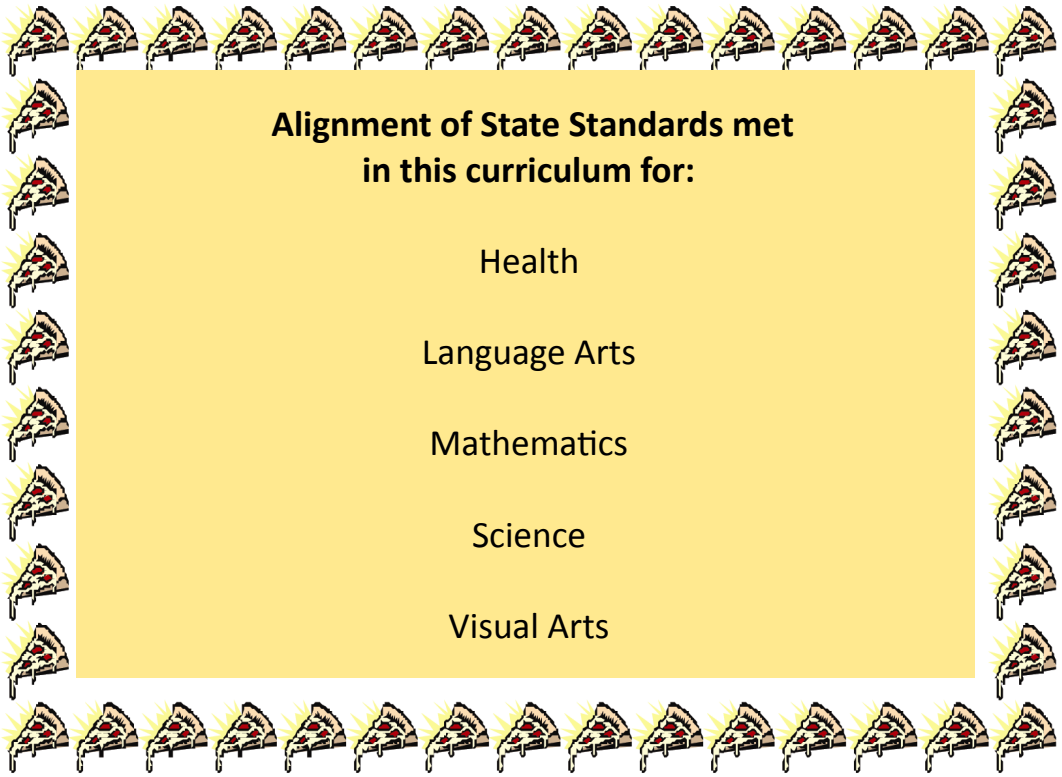
Other comments:

Please return the teacher evaluation to:

Protected Under
18 U.S.C. 707

Appendix C: Standards

Next Generation Sunshine State Standards (NGSSS)
&
Common Core State Standards (CCSS)



Alignment of State Standards met in this curriculum for:

Health

Language Arts

Mathematics

Science

Visual Arts

STATE STANDARDS BY LESSON

Grades 3-5

Lesson 1–Pizza Works

Grade 3

NGSSS

LA.3.6.3.1

The student will determine main content and supporting details, including distinguishing fact from opinion, in a print media message.

LA.3.5.2.2

The student will plan, organize, and give an oral presentation and use appropriate voice, eye, and body movements for the topic, audience, and occasion.

CCSS

LACC.3.L.3.6

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).

LACC.3.SL.1.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

Grade 4

NGSSS

LA.4.5.2.2

The student will plan, organize, and give an oral presentation and use appropriate voice, eye, and body movements for the topic, audience, and occasion.

LA.4.5.2.3

The student will listen attentively to speakers and take notes as needed to ensure accuracy of information.

CCSS

LACC.4.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

LACC.4.SL.1.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

Grade 5

NGSSS

LA.5.5.2.1

The student will listen and speak to gain and share information for a variety of purposes, including personal interviews, dramatic and poetic recitations, and formal presentations

CCSS

LACC.5.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

LACC.5.SL.1.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

LACC.5.W.1.2

Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Lesson 2–Wheat Watchers

Grade 3

NGSSS

LA.3.4.2.2

The student will record information (e.g., observations, notes, lists, charts, map labels, legends) related to a topic, including visual aids as appropriate.

SC.3.N.1.2

Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.

CCSS

LACC.3.L.2.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

LACC.3.RF.3.3

Know and apply grade-level phonics and word analysis skills in decoding words.

Grade 4

NGSSS

LA.4.5.2.1

The student will listen to information presented orally and show an understanding of key points.

LA.4.4.2.2

The student will record information (e.g., observations, notes, lists, charts, map labels, legends) related to a topic, including visual aids as appropriate.

CCSS

LACC.4.L.2.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

LACC.4.RF.3.3

Know and apply grade-level phonics and word analysis skills in decoding words.

Grade 5

NGSSS

LA.5.4.2.2

The student will record information (e.g., observations, notes, lists, charts,
map labels, legends) related to a topic, including visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate.

CCSS

LACC.5.L.2.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

LACC.5.RF.3.3

Know and apply grade-level phonics and word analysis skills in decoding words.

Lesson 3–Can I Take Your Order Please?

Grade 3

NGSSS

HE.3.C.1.1

Describe healthy behaviors that affect personal health.

HE.3.P.7.1

Practice responsible personal health behaviors.

CCSS

LACC.3.RI.1.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

Grade 4

NGSSS

HE.4.P.7.2

Discuss a variety of healthy practices and behaviors to maintain or improve personal health and reduce health risks.

HE.4.C.1.1

Identify the relationship between healthy behaviors and personal health.

CCSS

LACC.4.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic.

LACC.4.SL.1.1

Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

Grade 5

NGSSS

HE.5.C.1.1

Describe the relationship between healthy behaviors and personal health.

HE.4.5.P.7.1

Model responsible personal health behaviors.

CCSS

LACC.5.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

LACC.5.RF.3.3

Know and apply grade-level phonics and word analysis skills in decoding words.

Lesson 4–Got Cheese?

Grade 3

NGSSS

HE.3.C.1.1

Describe healthy behaviors that affect personal health.

HE.3.P.7.1

Practice responsible personal health behaviors.

CCSS

LACC.3.RI.1.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

LACC.3.SL.1.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

Grade 4

NGSSS

HE.4.P.7.2

Discuss a variety of healthy practices and behaviors to maintain or improve personal health and reduce health risks.

HE.4.C.1.1

Identify the relationship between healthy behaviors and personal health.

CCSS

LACC.4.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic.

LACC.4.SL.1.1

Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

Grade 5

NGSSS

HE.5.C.1.1

Describe the relationship between healthy behaviors and personal health.

HE.4.5.P.7.1

Model responsible personal health behaviors.

CCSS

LACC.5.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

LACC.5.RF.3.3

Know and apply grade-level phonics and word analysis skills in decoding words.

Lesson 5–Project Herb

Grade 3

NGSSS

SC.3.N.1.3

Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.

LA.3.5.2.2

The student will plan, organize, and give an oral presentation and use appropriate voice, eye, and body movements for the topic, audience, and occasion.

CCSS

LACC.3.RL.1.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

LACC.3.L.3.6

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships.

Grade 4

NGSSS

MA.4.A.4.2

Describe mathematics relationships using expressions, equations, and visual representations.

LA.4.5.2.2

The student will plan, organize, and give an oral presentation and use appropriate voice, eye, and body movements for the topic, audience, and occasion.

CCSS

LACC.4.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic.

LACC.4.RL.1.1

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

Grade 5

NGSSS

LA.5.5.2.1

The student will listen and speak to gain and share information for a variety of purposes, including personal interviews, dramatic and poetic recitations, and formal presentations.

LA.5.2.2.3

The student will organize information to show understanding.

CCSS

LACC.5.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

LACC.5.SL.1.1

Engage effectively in a range of collaborative discussions with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

Lesson 6–Can You Top This?

Grade 3

NGSSS

SC.3.N.1.3

Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.

CCSS

LACC.3.RL.1.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

LACC.3.L.3.6

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships.

Grade 4

NGSSS

MA.4.A.4.2

Describe mathematics relationships using expressions, equations, and visual representations.

CCSS

LACC.4.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic.

LACC.4.RL.1.1

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

Grade 5

NGSSS

LA.5.2.2.3

The student will organize information to show understanding.

CCSS

LACC.5.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

LACC.5.SL.1.1

Engage effectively in a range of collaborative discussions with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

Lesson 7–There's a Tree In My Pizza

Grade 3

NGSSS

LA.3.5.2.1

The student will recall, interpret, and summarize information presented orally.

VA.3.C.1.2

Reflect on and interpret works of art, using observation skills, prior knowledge, and experience.

CCSS

LACC.3.SL.1.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

LACC.3.SL.2.4

Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

Grade 4

NGSSS

LA.4.5.2.1

The student will listen to information presented orally and show an understanding of key points.

VA.4.O.1.1

Use the structural elements of art and organizational principles of design to understand the art-making process.

CCSS

LACC.4.L.2.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

LACC.4.SL.1.1

Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

Grade 5

NGSSS

LA.5.5.2.1

The student will listen and speak to gain and share information for a variety of purposes, including personal interviews, dramatic and poetic recitations, and formal presentations.

VA.5.C.1.2

Use prior knowledge and observation skills to reflect on, analyze, and interpret exemplary works of art.

CCSS

LACC.5.L.2.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

LACC.5.SL.2.4

Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Lesson 8–Leaning Tower of Pizza

Grade 3

NGSSS

SC.3.N.1.6

Infer based on observation.

LA.3.6.2.4

The student will record basic bibliographic data and recognize intellectual property rights (e.g., cites sources of ideas).

CCSS

LACC.3.RI.1.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

LACC.3.L.3.6

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships.

Grade 4

NGSSS

SC.4.N.1.6

Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

LA.4.6.2.4

The student will record basic bibliographic data and present quotes using ethical practices (e.g., avoids plagiarism).

CCSS

LACC.4.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic.

LACC.4.RI.1.3

Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Grade 5

NGSSS

LA.5.6.2.4

The student will record basic bibliographic data and present quotes using ethical practices (e.g., avoids plagiarism).

SC.5.N.1.6

Recognize and explain the difference between personal opinion/interpretation and verified observation.

CCSS

LACC.5.L.3.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

LACC.5.SL.2.5

Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Appendix D:
Recognition Certificate
And
Pizza Stickers



Lesson 1 Pizza Works!	**Lesson 2** Wheat Watchers!	**Lesson 3** Can I Take Your Order Please?	**Lesson 4** Got cheese?
Lesson 5 Project Herb	**Lesson 6** Can You Top This?	**Lesson 7** There's A Tree in My Pizza!	**Lesson 8** Leaning Tower of Pizza

_____
Student Signature

_____
Teacher Signature

_____
Date

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