

# THE “GOOD FOR YOU” PIZZA STORE

A Multi-disciplinary Lesson for 6th-grade Students

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Everyone eats. Everyone likes to make money. This instructional plan appeals to these facts by engaging students in nutritional research, exercises in cost and profit, and advertising. Pizza was selected because it is a favorite food of many middle school students and thus has high appeal. The “store” format allows students to engage in learning in mathematics, language arts, nutrition, visual arts, and economics. The overall result is an engaging, student-centered, problem-based series of lessons incorporating several disciplines and integrating several technological applications.

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# PHASE I: PLANNING THE STORE

## Instructional Materials

- 🔊 Lesson Title: *Enter the Managers*
- 🔊 Subject Areas: *Language Arts, Mathematics*
- 🔊 Grade Level: *6th*

- Samples of menus from local pizza restaurants or from online restaurants
- Think Sheets 1 and 2
- Microsoft Access
- Printer
- Printer paper
- Food-service or bulk-supplier catalogs

## Lesson introduction

## Problem Statement

You and your team members will open a new pizza restaurant together. You need to make a list of all the things necessary to open your restaurant. You will use the computer to design a simple database to help you buy those supplies and to design a menu. Things to consider while creating your database are how large a restaurant you are opening, how many tables and chairs you will need, what kind of pizza you will serve, how many forks, knives, and napkins you need, what will be used to collect the money, and how you will decorate the restaurant.

Everyone has eaten at a pizza restaurant. What do you need to open a pizza restaurant? How many of each item do you need? What should the décor of the restaurant be?

## Instructional Objective

## Computer Integration

Having observed the school's kitchen and cafeteria, and having visited two local restaurants to observe their layout, students will develop a database of the materials necessary to open a pizza restaurant, using clear fields (categories) and consistent language. The database should include the kitchen appliances, ingredients for the food to be served, beverages, tables, chairs, flatware, dining room supplies, decorations, etc. Each item in the database should include one field with the estimated price per item, and another field for the expected quantity necessary for the store.

Design a simple database of the supplies necessary to open a pizza restaurant. Students should use Microsoft Access. The database should include food, kitchen supplies, and dining room supplies.

## Results Presentation

## Lesson Plan Standards

- 🔊 **NT.K-12.3:** Technology Productivity Tools
  - » Students use technology tools to enhance learning, increase productivity, and promote creativity.
  - » Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- 🔊 **NT.K-12.1:** Basic operations and concepts
  - » Students demonstrate a sound understanding of the nature and operation of technology systems

Print a copy of each completed database report.

## Computer Activities

### PRIOR TO COMPUTER USE

- 🔊 Draft the basic layout of your database
- 🔊 Identify what fields and items are necessary
- 🔊 Group items under fields

### THINK SHEET #1: PRIOR TO COMPUTER USE

- Before creating the database for your restaurant, you need to think of a logical way to group the items. What are the best possible fields (categories)? Should entries be in ascending or descending order?
- How large will your restaurant be? What kinds of things are in a pizza restaurant dining area and kitchen?
- What kind of food and ingredients will you need?

### DURING COMPUTER USE

- 🔊 Use Microsoft Access to produce the database
- 🔊 Use Microsoft Access to generate at least three different reports. One report must include the quantity of each item and the price estimate for those items

- Print one draft report, make corrections, and print one final report

### AFTER COMPUTER USE

- Evaluate database report against the rubric
- Evaluate other teams' database
- Calculate the costs of purchasing the supplies using the appropriate report to guide your calculations

### THINK SHEET #2: AFTER COMPUTER USE

1. What information should you consider when deciding how large a restaurant is best?
2. Is the décor appropriate for your prospective customers?
3. Will you offer delivery service and how?
4. After seeing other teams' databases, would you change yours? In what way? Why?
5. What are additional costs, other than the costs of supplies, that you would need to consider when deciding how to price your menu items?
6. Based on your report listing prices and quantities, what do you estimate the total start-up cost for your pizza store to be?

### Supporting Activities

The day before the lesson students will be asked to look at the school cafeteria kitchen and make a list of the things they see and to go to two local restaurants and count how many tables and chairs there are.

### Culminating Activity

Draw a simple layout of your restaurant including the tables and location of the kitchen. Think of a name for the restaurant.

- Divide students into five groups of five students
- Introduce Phase I of this Instructional Plan
- Have students complete Think Sheet 1
- Rotate students to computers as they become ready
- Instruct students to evaluate their own database with the rubric, and then have each team evaluate another team's database
- Have students complete Think Sheet 2 and do a simple cost projection.

### Assessment

The final version of the database and the reports will be evaluated using the rubric on the following page.



## Phase I Evaluation Rubric

Element	1	2	3	4	Total
<b>Database Content</b>	Each entry was only under one field	Entries were relevant to a pizza restaurant	Entries were in a logical organization	Entries were logical and included amounts	
<b>Database Layout</b>	Included at least two fields, one for the kitchen and one for the dining area	Included at least three fields, entries and categories were logically connected	Included four fields not including amounts, entries and categories were logically connected and consistent	Included at least five fields including amounts, entries and categories were logically connected, consistent	
<b>Database Reports</b>	One report was generated and printed	Two different reports were generated and printed	Three different reports were generated and printed, but none included pricing information	Three different reports were generated and printed, including one report covering pricing information	
<b>Spelling</b>	10 or more spelling errors	5 to 9 spelling errors	1 to 4 spelling errors	Error free	
				<b>Total</b>	

# PHASE II: THE MENU

- 🍷 Lesson Title: *Mouth Watering Morsels*
- 🍷 Subject Areas: *Language Arts, Visual Arts, Mathematics*
- 🍷 Grade Level: *6th*

## Lesson Introduction

This is your opportunity to develop the menu you will use in your pizza store. You will be using the computer to design a layout, and may use different fonts, colors, and graphics. Things to consider while creating your menu are how well it conveys information to the customer. Is it easy to tell how much an item costs and what ingredients are in each item? Are colors and graphics eye-catching or distracting? Does your menu prompt you to eagerly anticipate your food, or wish you could eat somewhere else? If you were the customer, what impression will the menu give of your restaurant as a whole? Pizzas also have a reputation for being unhealthy, but can you create a pizza that is both delicious and healthy?

## Instructional Objective

Having gained an understanding of some of the costs involved in opening a pizza store from activities in Phase I, students will design and compose an error free menu that communicates item details and

prices in an easily comprehensible way.

## Lesson Plan Standards

- 🍷 **NA-VA.5-8.1: Understanding and Applying Media, Techniques, and Processes**
    - » Students select media, techniques, and processes; analyze what makes them effective or not effective in communicating ideas; and reflect upon the effectiveness of their choices
    - » Students intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas
  - 🍷 **NL-ENG.K-12.12: Applying Language Skills**
    - » Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).
  - 🍷 **NL-ENG.K-12.4: Communication Skills**
    - » Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
  - 🍷 **NT.K-12.3: Technology Productivity Tools**
    - » Students use technology tools to enhance learning, increase productivity, and promote creativity.
    - » Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- ## Instructional Materials
- Pricing figures determined in Phase I
  - Calorie information for different pizza ingredients
  - Product information developed in Phase I
  - Samples of menus from local restaurants
  - Printing cost information
  - Think Sheets 1 and 2
  - Microsoft Word



- h. Color printer
- i. Printer paper/card stock

### Problem Statement

We've all eaten in restaurants and used a menu to decide what we want to eat. How would you design your menu to best communicate the products you are offering to your customers?

### Computer Integration

The students will use Microsoft Word to list menu choices, group items by price or ingredient, write descriptions, edit and verify spelling.

### Results Presentation

Each team will print a copy of their completed menu.

### Computer Activities

#### PRIOR TO COMPUTER USE

- ☛ Draft basic layout
- ☛ Group items
- ☛ Determine overall size (full page, half-page, tri-fold)

#### THINK SHEET #1: PRIOR TO COMPUTER USE

1. Before listing your items on your menu, you must consider how you will group them. What are the possible groupings? What grouping are you choosing? Why?
2. What is the minimum information that MUST be included on a menu?
3. How will font and color influence the appeal of your menu?

#### DURING COMPUTER USE

- ☛ Use Microsoft Word to produce the menu
- ☛ Incorporate font, color, graphics
- ☛ Print one draft, make corrections, and one final copy

#### AFTER COMPUTER USE

- ☛ Evaluate menu against rubric
- ☛ Evaluate other teams' menus
- ☛ Calculate printing cost based on size of menu and number of menus required

#### THINK SHEET #2: AFTER COMPUTER USE

1. What information should you consider when deciding how many menus to print/order?

2. How do font and layout contribute to readability and ease of use?
3. After seeing other teams' menus, would you change yours? In what way? Why?

### Supporting Activities

In an effort to promote health along with promoting creativity, students will also be directed towards including "healthy" pizzas on their menu. In a regular classroom setting prior to this lesson, students will compare the nutritional value of some of the more common pizza toppings as well as explore some of the less conventional pizza toppings. If there is a local grocer—or better yet, pizza store—that caters to health-conscious individuals, teachers should arrange either for a field trip or for a visit from a representative to talk about different things to consider as part of a healthy diet. Students will also view sample menus from a variety of restaurants and review printing costs.

### Culminating Activity

Students will present printed copies of their menu to their peers and go around the classroom taking orders from each other.

### Implementation Plan

- ☛ Gather the necessary materials
- ☛ Continue with groups determined in Phase I
- ☛ Introduce Phase II of this Instructional Plan
- ☛ Have students complete "Activities Prior to Computer Use" and Think Sheet 1
- ☛ Rotate students to computers as they become ready
- ☛ Instruct students to evaluate their own menu with the rubric, and then have each team evaluate another team's menu
- ☛ Have students complete Think Sheet 2 and do a simple cost projection.

### Assessment

The final version of the menu will be evaluated using the rubric on the following page.



## Phase II Evaluation Rubric

Element	1	2	3	4	Total
<b>Menu content</b>	Included at least two items and prices	Included at least two items with descriptions and prices	Included 3 to 4 choices with descriptions, nutritional information and prices	Included 5 or more choices with descriptions, nutritional information, and prices	
<b>Menu Layout</b>	Items and prices appeared on the same page	Items and prices were visually connected	Items and prices were consistently formatted	Items and prices were consistently formatted and visually connected	
<b>Font (style, size)</b>	Font chosen is legible, but does not enhance appeal of items	Fonts were used consistently and are easy to read	Font choices enhanced appearance	Font choices enhanced overall appearance and emphasized information appropriately	
<b>Color use</b>	One color was used throughout menu	Two colors were used	Two or more colors were used to enhance appearance	Two or more colors were used to enhance overall appearance and encode information for ease of comprehension	
<b>Graphics use</b>	No graphics were used	One graphic was used	Two or more graphics were used to decorate the menu	Two or more graphics were used to decorate and clarify information on the menu	
<b>Spelling</b>	10 or more spelling errors	5 to 9 spelling errors	1 to 4 spelling errors	Error free	
<b>Overall Appeal</b>	Font, color, graphics or layout distracts from appearance	Font, color and graphics are used, but overall appearance is sloppy	Appearance is neat, but lacks “eye catching” appeal	Professional appearance, appealing to the eye through use of font, layout, color and graphics	
				<b>Total</b>	

# PHASE III: “SELLING” YOUR PRODUCT

- 🎯 Lesson Title: *The Pizza Publicity Practitioners*
- 🎯 Subject Areas: *Language Arts, Visual Arts*
- 🎯 Grade Level: *6th*

## Lesson Introduction

As you may have noticed during your research of different pizza stores in the area, this is a competitive market! There are several pizza outlets, and they can be seen as your competitors. During this activity, think about some of the different ways they compete with each other.

Another thing you may have noticed during the database activity (Phase I) is that it can take a good amount of money to get a business started! Different parts of town are more expensive to rent space, you have to buy all kinds of equipment, and you have to pay for people to work and for the ingredients for your pizzas.

In other words, we still have two problems. First, considering the competition, how can you help your business do better? Second, if you still haven't even opened your business yet because of a shortage of money, how can you raise enough money to get your business running smoothly?

*Your task:* Your team will select one of the above problems and create a Microsoft PowerPoint presentation to sell your product to your intended audience.

## Instructional Objectives

1. Shown examples of storyboarding, and having analyzed different video advertisements, students will design an error-free, 15 slide, 10-minute Microsoft PowerPoint presentation.
2. Having reviewed examples of health advocacy documents (print and electronic media), students will describe how their pizzas are healthier than the competition's using vocabulary appropriate to nutrition.
3. Given a chance to present and discuss their presentation with their classmates, students will convince their classmates to buy or sponsor their project with a 60% success

rate as measured by a classroom poll.

## Lesson Plan Standards

- 🎯 **NA-VA.5-8.1:** Understanding and applying media, techniques and processes
  - » Students intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas (**Objectives: 1, 2, 3**)
- 🎯 **NA-T.5-8.6:** Comparing and incorporating art forms by analyzing methods of presentation and audience response for theatre, dramatic media (such as film, television, and electronic media), and other art forms
  - » Students incorporate elements of dance, music, and visual arts to express ideas and emotions in improvised and scripted scenes (**Objectives: 1, 3**)
- 🎯 **NA-T.5-8.7:** Analyzing, evaluating, and constructing meanings from improvised and scripted scenes and from theatre, film, television, and electronic media productions
  - » Students describe and analyze the effect of publicity, study guides, programs, and physical environments on audience response and appreciation of dramatic performances (**Objectives: 1, 2, 3**)
- 🎯 **NL-ENG.K-12.4:** Communication skills
  - » Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes (**Objectives: 2, 3**)
- 🎯 **NL-ENG.K-12.12:** Applying language skills
  - » Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information) (**Objectives: 2, 3**)
- 🎯 **NPH-H.5-8.2:** Health information, products and services
  - » Students will demonstrate the ability to access valid health information and health-promoting products and services (e.g., Analyze the validity of health information, products, and services) (**Objectives: 2**)

- 👉 **NPH-H.5-8.4:** Influences on health
  - » Students will analyze the influence of culture, media, technology, and other factors on health (e.g., Analyze how messages from media and other sources influence health behaviors) (Objectives: 2)
- 👉 **NPH-H.5-8.5:** Using communications skills to promote health
  - » Students will demonstrate the ability to use interpersonal communication skills to enhance health (e.g., Demonstrate effective verbal and non-verbal communication skills to enhance health) (Objectives: 2)
- 👉 **NPH-H.5-8.7:** Health advocacy
  - » Students will demonstrate the ability to advocate for personal, family, and community health (e.g., Analyze various communication methods to accurately express health information and ideas) (Objectives: 2)
- 👉 **NT.K-12.1:** Basic operations and concepts
  - » Students demonstrate a sound understanding of the nature and operation of technology systems (Objectives: 1, 3)
- 👉 **NT.K-12.3:** Technology productivity tools
  - » Students use technology tools to enhance

learning, increase productivity, and promote creativity (Objectives: 1, 2, 3)

- 👉 **NT.K-12.4:** Technology communication tools
  - » Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences (Objectives: 2, 3)

## Instructional Materials

The following instructional materials include materials which will be used before, during, and after computer activities, including materials required for supporting activities.

- a. Brochures and videos from local clinics on a range of health issues, but in particular, on nutrition. Students will refer to these for ideas of the format of presentation (including the use of graphics) and the type of language used for different media.

### THINK SHEET #1: HEALTH PUBLICITY

1. What are some of the common elements, both graphical and textual, that you notice in these publications?
2. How are these different from advertisements you see in magazines, in newspapers, or on television?
3. How do these publications give you a visual idea of “health”?

- b. Recordings and clippings of advertisements for food products. Food products for the health conscious will also be included. Students will analyze these based on content and presentation to identify the “features” most often promoted and the language used (for example, “Same great taste with half the fat!).

### THINK SHEET #2: ADVERTISEMENTS

1. What kind of language is used in this media? What are some of the commonly used words or phrases?
2. Where might you see these different kinds of advertisements?



3. For television advertisements, (1) how long are the advertisements, on average, and (2) when do you think the best time of day to show these advertisements would be?

- c. Cookbooks promoting “healthy” cooking. Students will use these cookbooks to identify the different “value” of different ingredients in a well balanced diet as well as identify different recipes that may be adapted to creating a pizza.

### THINK SHEET #3: COOKBOOKS AND RECIPES

1. How do the pictures used in the cookbooks compare to the pictures used in advertising?
2. What sort of information is included to help you decide how nutritious a particular recipe is?
3. Why might these recipes be less popular with some people? What can you do to change their minds?

- d. Examples of storyboards. Storyboard examples will be used for inspiration and clarification to help students plan their presentation.

### THINK SHEET #4: STORYBOARDS



1. What is the main purpose of a storyboard?
2. What kinds of information is included in a storyboard?

- e. Five student computers loaded with a full Microsoft Office Suite.
- f. Findings from Phase I and Phase II of this lesson group.

- g. Scanner (for teacher to digitize the storyboards created by the groups).
- h. CD burner or other mass-storage device to return scanned images to each group.

### Problem Statement

Students have a choice of two problems to address:

1. Considering the competition, how can you help your business do better?
2. If you still haven't even opened your business yet because of a shortage of money, how can you raise enough money to get your business running smoothly?

### Computer Integration

Microsoft PowerPoint will be used to promote visual arts, health advocacy, English communication skills, and technology use.

### Results Presentation

Each group will make its presentation to the class. Prior to the presentation, the class will discuss some of their responses to the questions asked under “Activities after computer use”. Following each presentation, there will be a question-and-answer/comments session, following which an informal poll will be conducted to gauge the effectiveness of the presentation.

### Computer Activities

#### PRIOR TO COMPUTER USE

- ☛ Students will review **instructional materials a** through **d** above and use the Think Sheet questions to guide their completion of the project.
- ☛ Students will create storyboards for each of the slides to be included in their presentation. Slides will include graphical elements (including charts or other similar images) as well as textual elements. Using the notes feature in Microsoft PowerPoint, students will add (1) the narrative that they will use when addressing the class, and (2) the narrative that the final advertisement or sales pitch would include.
- ☛ Students will edit the storyboards of their fellow group members, re-drawing any storyboards that need major alterations.
- ☛ Students will submit their completed

storyboards to be scanned by the teacher. The teacher will return the digitized storyboards on a CD for use in creating the Microsoft PowerPoint presentation.

### DURING COMPUTER USE

During this time, each group will meet at their respective workstations. At any given time, there will only be two students at the computer. One of the students at the computer serves both as quality control as well as helps direct the other student. The other student inputs the information necessary. The remaining three students will use this time to rehearse their final presentation. Their fellow group-mates will offer feedback on the timing and effectiveness of delivery.

- Students will import their pictures into their presentations.
- Students will ensure that each slide has a title and includes the notes made earlier.
- Students will rehearse their presentation, paying attention to both the content (particularly proofreading) and the timing.
- Students will regularly save their work to their group folder.

### AFTER COMPUTER USE

Following the creation of the Microsoft PowerPoint presentation, the students will reflect on the experience.

### THINK SHEET #5: REFLECTION

1. If you were being asked to sponsor/purchase this product, and this presentation was your primary source of information, would you sponsor/purchase it? Why or why not?
2. What are some other approaches besides a presentation that could be used to convey the same message?
3. What are some things you hoped to be able to do with the software that you were not able to do?
4. How helpful would this information be presented in a different media, for example, as a web-page?
- 5.

## Supporting Activities

All of the information gathered for this activity is done during the “Activities Before Computer Use” stage. For more information about these supporting activities, please refer back to the [Instructional Materials](#) section, items [a](#) through [d](#).

## Implementation Plan

An overview of the implementation plan for this block of activities can be found on page 14. For Phase III, however, there are some noteworthy differences.

1. As a significant amount of the activity involved for this phase does not require the use of computers, *all* computer use will take place on a single day, utilizing the entire class hour.
2. There will be *no* internet use at all during this computer activity.
3. Information regarding student rotation can be found under [Computer Activities: During Computer Use](#)

## Assessment

The final presentation will be evaluated using the rubric on the following page.



## Phase III Evaluation Rubric

Element	1	2	3	4	Total
<b>Thoroughness of Slideshow</b>	Five or fewer slides were included	Between five and ten slides were included	10 to 15 slides were included, or 15 slides were included but the presentation ran short	15 slides were included and the presentation was an appropriate length	
<b>Presentation Legibility</b>	Fonts used were small or awkwardly sized or in a hard-to-read color	Font size was appropriate but color, background choice, or font style impaired legibility	Font colors and background colors blended well, but font styles were inconsistent	Font color and background colors added to the aesthetics of the presentation, and font styles were consistent	
<b>Oral Language</b>	Student mumbled, spoke too quietly, or too quickly to be understood clearly	Student was clear spoken but relied heavily on visual prompts, such as the words projected on the screen	Student was clear spoken but displayed minimal enthusiasm. Little attempt was made to mimic the range of vocal expressions observed in advertisements	Student was clear spoken and used appropriate vocal expressions as necessary	
<b>Sequential Logic</b>	Storyboard frames were presented haphazardly. Sequence of events was difficult to understand	Core ideas are well represented in the storyboards but no accompanying text is included	Core ideas are represented in the storyboard as well as either (1) the narrative that they will use when addressing the class, or (2) the narrative that the final advertisement or sales pitch would include, but not both	Core ideas are clearly represented in the storyboard along with narratives to be used for both addressing the class and for a sales pitch	
<b>Spelling</b>	10 or more spelling errors	5 to 9 spelling errors	1 to 4 spelling errors	Error free	
<b>Overall Appeal</b>	Font, color, graphics or layout distracts from appearance	Font, color and graphics are used, but overall appearance is sloppy	Appearance is neat, but lacks "eye catching" appeal	Professional appearance, appealing to the eye through use of font, layout, color and graphics	
				<b>Total</b>	

# IMPLEMENTATION PLAN

This sixth-grade classroom is equipped with five student computers and one color printer. There are twenty-five students in the class. The “Good for You” Pizza Store instructional plan will be implemented as described below.

## Student Computer Use

Students will use the computers for approximately one-third of the class time. Students will follow established classroom rules pertaining to use of the computer equipment.

## Rotation of Computer

Each five-student team will use the same computer throughout the entire project; their files which will be saved in a team folder on their assigned computer. Teams will use computers in 20-minute segments beginning 10 minutes into the class period. As there are 25 students and five computers, there is no need to rotate computers amongst teams. Students will rotate roles to ensure that each team member does an equal portion of computer and non-computer activities (see below).

## Student Computer Teaming and Team Roles

Students will be divided into groups of five and will work on each portion of the project as a team. Each team member will be expected to do a portion of the keyboarding and other computer-related work over the course of the entire instructional block. Team members who are not actively using the keyboard will engage in a range of activities including: (1) dictation of data to be entered, (2) editing the printed drafts or the outline materials needed to be entered, or (3) partaking in supporting activities or other preparatory activities.

## Internet Use Guidelines

Students will follow school guidelines when accessing the internet. This includes no checking of personal e-mail accounts or using instant messaging services, and visiting only those websites authorized by the teacher.

## Internet Downloads

All downloads will be conducted by the teacher or with the teacher’s express permission. Only downloads related to the exercise and originating from legitimate sites will be allowed.

## Student Help

Each lesson will include printed reference sheets when appropriate. In general these reference sheets include reminders on where students should save their work, how they should title their documents, and step-by-step instructions for the particular computer program being used. These reference sheets should *minimize*, but most likely will not *eliminate*, the need for students to request other help. Students may obtain technical help from their teacher or from another student in their class. Students may also share the search process they used between groups.

## Troubleshooting

Should a technical problem arise while students are using the computer, students will immediately bring it to the teacher’s attention. Students will not attempt to access *any* of the configuration settings on the computer, nor change any of the setup parameters.

## Close of Class

At the end of the class period, students will save their work in their team folder on the computer. They will return all equipment to its original place, clean up all printouts and planning papers, and make a note of what they have left to do during the next period.

# DIVERSE LEARNER MODIFICATIONS

The demographics of Children from Culturally and Linguistically Diverse (CLD) backgrounds is rapidly growing. Teachers must be sensitive to their cultures and be able to respond to their needs. These students often do not share the same experiences of mainstream students. Although most students have eaten at a pizza restaurant, that may not be true for CLD students. CLD students who have eaten at a pizza restaurant may not be familiar with what is necessary to open a pizza restaurant due to their limited experiences. The database lesson plan has been modified to allow CLD students to choose a restaurant type with which they are more familiar. It is important that the students understand that the teacher is not reinforcing any ethnic stereotypes when implementing the following modifications, but rather attempting to facilitate the achievement of the instructional objectives. Similar modifications can be made to the lessons in Phases II and III.

- 🍷 Lesson Title: *Enter the Managers*
- 🍷 Subject Areas: *Language Arts, Mathematics*
- 🍷 Grade Level: *6th*

## Lesson Introduction

You and your team members will open a new restaurant of your choice together. You need to make a list of all the things necessary to open your restaurant. You will use the computer to design a simple database to help you buy those supplies and to design a menu. Things to consider while creating your database are how large a restaurant you're opening, how many tables and chairs you will need, what kind of food you will serve, what kind of utensils you need, what you will use to collect the money, and how you will decorate the restaurant.

## Instructional Objective

Having observed the school's kitchen and cafeteria, and having visited two local restaurants to observe their layout, students will develop a database of the materials necessary to open a pizza restaurant, using clear fields (categories) and consistent language. The database should include the kitchen appliances, ingredients for

the food to be served, beverages, tables, chairs, flatware, dining room supplies, decorations, etc. Each item in the database should include one field with the estimated price per item, and another field for the expected quantity necessary for the store. The students may decide what the cuisine of the restaurant will be.

## Lesson Plan Standards

- 🍷 **NT.K-12.3:** Technology Productivity Tools
  - » Students use technology tools to enhance learning, increase productivity, and promote creativity.
  - » Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- 🍷 **NT.K-12.1:** Basic operations and concepts
  - » Students demonstrate a sound understanding of the nature and operation of technology systems

## Instructional Materials

- Printed sample menus from restaurants the teacher finds online or locally featuring the cuisine the CLD student is familiar with
- Think Sheets 1 and 2
- Microsoft Access
- Printer
- Printer paper
- Food-service or bulk-supplier catalogs

## Problem Statement

Everyone has eaten at a restaurant. What do you need to open a restaurant? How many of each item do you need? What should the décor of the restaurant be?

## Computer Integration

Design a simple database of the supplies necessary to open a restaurant. Students should use Microsoft Access. The database should include food, kitchen supplies, and dining room supplies.

## Results Presentation

Print a copy of each completed database report.

## Computer Activities

### PRIOR TO COMPUTER USE

- 🍷 Draft the basic layout of your database

- ☛ Identify what fields and items are necessary
- ☛ Group items under fields

### THINK SHEET #1: PRIOR TO COMPUTER USE

1. Before creating the database for your restaurant, you need to think of a logical way to group the items. What are the best possible fields (categories)? Should entries be in ascending or descending order?
2. How large will your restaurant be? What kinds of things are in a pizza restaurant dining area and kitchen?
3. What kind of food and ingredients will you need?

### DURING COMPUTER USE

- ☛ Use Microsoft Access to produce the database
- ☛ Use Microsoft Access to generate at least three different reports. One report must include the quantity of each item and the price estimate for those items
- ☛ Print one draft report, make corrections, and print one final report

### AFTER COMPUTER USE

- ☛ Evaluate database report against the rubric
- ☛ Evaluate other teams' database
- ☛ Calculate the costs of purchasing the supplies using the appropriate report to guide your calculations

### THINK SHEET #2: AFTER COMPUTER USE

1. What information should you consider when deciding how large a restaurant is best?
2. Is the décor appropriate for your prospective customers?
3. Will you offer delivery service and how?
4. After seeing other teams' databases, would you change yours? In what way? Why?
5. What are some other cost, other than the costs of supplies, that you would need to consider when deciding how to price your menu items?
6. Based on your report listing prices and quantities, what do you estimate the total start-up cost for your pizza store to be?

The day before the lesson students will be asked to look at the school cafeteria kitchen and make a list of the things they see and to go to two local restaurants and count how many tables and chairs there are. If there are many CLD students resulting in a range of restaurant styles, it is encouraged to explore some of the cuisines by researching them online, arranging a visit to some of the local restaurants, or by bringing in cookbooks for the students to look through.

### Culminating Activity

Draw a simple layout of your restaurant including the tables and location of the kitchen. Think of a name for the restaurant.

### Implementation Plan

- ☛ Have students from similar cultural backgrounds team together
- ☛ Introduce Phase I of this Instructional Plan
- ☛ Have students complete Think Sheet 1
- ☛ Rotate students to computers as they become ready
- ☛ Instruct students to evaluate their own database with the rubric, and then have each team evaluate another team's database
- ☛ Have students complete Think Sheet 2 and do a simple cost projection.

### Assessment

The final version of the database and the reports will be evaluated using the rubric on the following page.

### Supporting Activities

## CLD Student Evaluation Rubric

Element	1	2	3	4	Total
<b>Database Content</b>	Each entry was only under one field	Entries were relevant to the type of restaurant being opened	Entries were in a logical organization	Entries were logical and included amounts	
<b>Database Layout</b>	Included at least two fields, one for the kitchen and one for the dining area	Included at least three fields, entries and categories were logically connected	Included four fields not including amounts, entries and categories were logically connected and consistent	Included at least five fields including amounts, entries and categories were logically connected, consistent	
<b>Database Reports</b>	One report was generated and printed	Two different reports were generated and printed	Three different reports were generated and printed, but none included pricing information	Three different reports were generated and printed, including one report covering pricing information	
<b>Spelling</b>	10 or more spelling errors	5 to 9 spelling errors	1 to 4 spelling errors	Error free	
				<b>Total</b>	

# OTHER IDEAS

An activity set such as this one is really only limited by your imagination and by your resources. Although Language Arts and Visual Arts were more heavily emphasized in the lesson plans on the previous pages, there were certainly basic mathematical elements introduced which could be further expanded upon.

Some other ideas you could consider if implementing this series of lessons include:

- Giving students a budget and having them actually go through the process of calculating their total sunk costs (machinery, rent, and so on) and their operating costs.
- Teaching students how to write a formal cover letter to include with a business proposal or presentation.
- Coordinating with the school's kitchen staff to see if it is possible to allow the students actually cook some of their creations. If your school is located in a strong community setting, you may also find that some of the local pizza restaurants will be willing to donate pizza dough for this activity.
- Compiling a recipe book of healthy pizza recipes and other food items that may accompany a pizza meal.
- Obtaining caloric measurements of various restaurant foods and comparing them to caloric measurements of home cooked meals.
- Using measurements and mathematics to have students design a floor-plan for their restaurant. They can get dimensions from catalogs or can measure the actual dimensions of food-production equipment in the cafeteria or at home.
- Letting students actually create a video advertisement for their store, providing that your classroom has the necessary equipment and software.
- Creating a spreadsheet activity to complement the database activity in Phase I. Students can compare menus from different pizza restaurants and chart the prices for some of the more

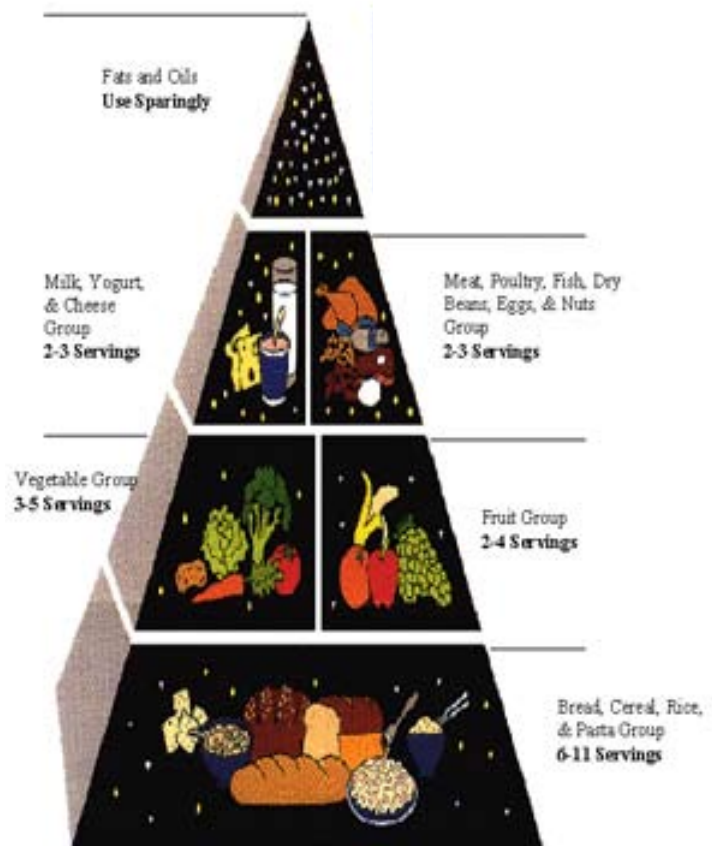
common pizza types and sizes.

- Using a food pyramid, similar to the one on this page to help students develop their menu or decide what toppings their pizzas should include.
- Getting parents involved to share some of their culinary skills in the classroom. This is particularly fun if you have students from a range of cultural backgrounds.

## Other Applicable National Standards

In addition to the standards which were included in these three lesson plans, there are some other standards which may be applicable once you start customizing the lesson plans to your needs. We have included some of these standards below. For an overview of the National Standards, please visit [www.educationworld.com/standards/](http://www.educationworld.com/standards/)

- **NPH-H.5-8.3: Reducing Health Risks**—Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks
  - » Explain the importance of assuming responsibility for personal health behaviors.



- » Analyze a personal health assessment to determine health strengths and risks.
- » Distinguish between safe and risky or harmful behaviors in relationships.
- » Demonstrate strategies to improve or maintain personal and family health.
- » Develop injury prevention and management strategies for personal and family health.
- » Demonstrate ways to avoid and reduce threatening situations.
- » Demonstrate strategies to manage stress.

👉 **NSS-EC.5-8.2: Marginal Cost/Benefit**—Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something: few choices are “all or nothing” decisions. At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- » To determine the best level of consumption of a product, people must compare the additional benefits with the additional costs of consuming a little more or a little less.

👉 **NSS-EC.5-8.7: Markets**—Price and Quantity Determination. Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services. At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- » Market prices are determined through the buying and selling decisions made by buyers and sellers.
- » Relative prices refers to the price of one good or service compared to the prices of other goods and services. Relative prices are the basic measures of the relative scarcity of products when prices are set by market forces (supply and demand).
- » The market clearing or equilibrium price for a good or service is the one price at which quantity supplied equals quantity demanded.
- » If a price is above the market clearing price, it will fall, causing sellers to produce less and buyers to purchase more; if it is below the market clearing price,

it will rise, causing sellers to produce more and buyers to purchase less.

👉 **NSS-EC.5-8.9: Role of Competition**—Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them. At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- » Sellers compete on the basis of price, product quality, customer service, product design and variety, and advertising.
- » Competition among buyers of a product results in higher product prices.
- » The level of competition in a market is influenced by the number of buyers and sellers.

👉 **NSS-EC.5-8.14: Profit and the Entrepreneur**—Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failure. At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- » Entrepreneurs compare the expected benefits of entering a new enterprise with the expected costs.
- » Entrepreneurs accept the risks in organizing resources to produce goods and services because they hope to earn profits.
- » Entrepreneurs and other sellers earn profits when buyers purchase the product they sell at prices high enough to cover the costs of production.
- » Entrepreneurs and other sellers incur losses when buyers do not purchase the products they sell at prices high enough to cover costs of production.
- » In addition to profits, entrepreneurs respond to other incentives including the opportunity to be their own boss, the chance to achieve recognition, and the satisfaction of creating new products or improving existing ones. In addition to financial losses, other disincentives to which entrepreneurs

respond include the responsibility, long hours, and stress of running a business

## Things to Keep in Mind

The lessons plans included on the previous pages do not necessarily span the same amount of time per phase. Nor do they necessarily employ the same structure for the use of computers. For example, when comparing the activities for Phase II and Phase III, you may note that Phase III places heavy emphasis on pre-computer preparations. Thus, rather than utilizing the computer time in shorter batches of time, as is done with the activities in Phase II, *all* of the computer activities in Phase III take place on a single day for a full class period.

You may find that the lesson plans above may need to be adjusted based on many factors which vary across classrooms. This includes the availability of computers in your classroom, the number of students you have, the types of software you have available or are allowed to install, or the level of ease with which your lessons can be integrated with lessons from other teachers in different departments.

As you can see from the overview of potentially applicable standards, you can also try adapting the lessons to suit different age/grade levels. For example, for middle school students, close integration with the mathematics of economics can lead to some very convincing lessons for the students. If your neighborhood has a good local newspaper, you may want to ask them if they ever feature successful local entrepreneurs, and try to arrange for guest lectures regarding what it takes to be an entrepreneur.

At any rate, we encourage you to give the lessons a try!

## CREDITS

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- » [http://images.meredith.com/bhg/images/06/a\\_pizzagarden.jpg](http://images.meredith.com/bhg/images/06/a_pizzagarden.jpg) (healthy pizza ingredients, page 6)

👉 Phase I developed by Christopher Wood

👉 Phase II developed by Marilee Warner

👉 Phase III developed by Ananda Mahto

Thanks!