

TIES 2006

Teachers in Industry for Educational Support

"Would You Like Fries With That?"

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"Would You Like Fries With That?" Curriculum Unit Overview

Summary

Cox Arboretum offers a variety of educational programs that relate to food and the science of nutrition. This curriculum project focuses on food that most students eat on a daily basis: junk food! The purpose of the project is to develop an awareness of the long term, harmful effects that fast food and bad eating habits can have on teens. Although the unit is designed for grades 9-12 in the subject areas of Math and English, it could easily be adapted for other grade levels or subjects.

Big Picture

The "hook" activity for this unit is based on the documentary "Super Size Me" featuring Morgan Spurlock. This documentary film takes students through a journey of eating nothing but McDonald's food three times a day for an entire month and the shocking results that this type of diet can have on an individual. Students will view the video and respond to discussion questions as a group. A personal response to the documentary will end the activity.

Preparation for the Unit

Work with other grade level instructors to:

- Identify a time line for the project
- Locate appropriate internet sources on nutrition and fast food for student use.
- Gather resources for classroom use (for example: books, posters, websites, etc.)
- Locate possible outside sources, such as guest speakers.
- Secure computer space/time in lab for classes.
- Investigate opportunities to use the library as a source if needed.

Overview

Curriculum Unit Summary "Would You Like Fries With That?"

Section Title Math	Section Title Language Arts
<p>ALT 1 - "The Foods We Eat" Students will learn the basics of a spreadsheet and create a graph based on the foods they eat in a typical day.</p>	<p>ALT 1 - "Daily Meal Journal" Students will keep of track of what they eat and reflect on their food choices each day.</p>
<p>ALT 2 - "Fast Food Scatterplot" Students will create a scatterplot using calories vs. fat grams</p>	<p>ALT 2 - "Targeting Teens" Students will investigate the methods of persuasion that commercials use to target young people.</p>
<p>Transfer or Culminating Activity or Project</p> <p>"A Campaign for Life"</p> <p>Students will take what they have learned about healthy eating, the dangers of junk food, and persuasive techniques to organize a campaign that promotes healthier eating among the teens in their school. Students can choose to campaign in the form of print ads, video announcements, or poster formats.</p>	

Please check the boxes for the subject areas that are represented in your module. These are the categories used for indexing the curriculum as it's posted to our website.

- English/Communications/Language Arts
- Science/Engineering/Design
- Business/Technology
- Teamwork/Problem-solving
- Careers/Life Skills/Family & Consumer Science
- Foreign Language
- Social Studies/History/Economics/Marketing

- Media/Graphics/Art/Music*
- Health/Physical Education*
- xMath*

Section One: Math

ALT 1: "The Foods We Eat"

Summary

Students will use online resources and a spreadsheet to compare the fat and calorie content of various food items from menus of three fast food restaurants. They will then create a day's worth of healthful meals using the menu from their favorite fast food restaurant.

Competencies

Students will be able to:

- compare various food items in terms of fat and calories
- understand the importance of limiting fats and empty calories in their diet.
- create a healthful meal using the information they have gathered and the menus already explored.
- use the computer to create a spreadsheet

Time

45 minutes

Materials

Diagram or poster of the food pyramid, computer with internet access, paper, pen/pencil

Instructions

1. Students should begin this lesson with a basic understanding of the dangers of a diet high in fat and calories. Display a diagram or poster of the food pyramid. Discuss good nutrition with students. (Instructors can also access information from the FDA's Dietary Guidelines for Americans, www.health.gov/dietaryguidelines/)
2. Ask students how many times they eat fast food during a typical week. Have students select three of their favorite fast food restaurants to research.

3. Students will then use the computer and go to www.foodfacts.info and pull up the menus from their favorite restaurants. (If you don't have computer access, print copies of various popular restaurants ahead of time and distribute to the class)
4. Students will choose five main meal items, or entrees that they might eat at each restaurant. They will then create a spreadsheet (using Excel or a similar program) to compare the fat and calories of each choice. (You can also have them expand their spreadsheet to include a full meal at each restaurant, or a side item analysis)
5. Once they have completed their analysis, instruct them to open a new spreadsheet document. They will then create a healthful meal from each restaurant. Be sure to remind them of the dietary guidelines for caloric intake and fat. They should also list any nutritional information that aided them in making a healthful choice.

Evaluation/Assessment of Student's Competency

- Evaluation will be based on both spreadsheet documents and the synthesis of nutritional facts as shown by the daily menus they create.

Closure

Close the lesson with students sharing their thoughts on their favorite fast foods and the information they discovered about what they have been eating. Let students know that they will be using some of their favorite food choices again in other lessons with the unit.

Section One: Math

ALT 2: "Fast Food Scatterplot"

Summary

Using the information from the worksheet "Fast Food Data Sheet", students will create a graph and scatterplot with the calories of meat sandwiches vs. the grams of fat in meat sandwiches.

Competencies

Students will be able to:

- compare various food items in terms of fat and calories
- understand the importance of limiting fats and empty calories in their diet.
- create a graph using slope intercept form
- create a scatterplot
- use equations to understand information

Time

1-2, 45 minute class periods

Materials

Graph paper, paper, pen/pencil, Fast food data sheet handout, Line of Best Fit handout

Instructions

-Students should have a basic understanding of graphing, scatterplots, and slope-intercept form before completing this activity. Instructors may want to review if necessary.

-Have students use the "Fast Food Data" handout to make a scatterplot on the graph paper with the calories of meat sandwiches vs. the grams of fat in meat sandwiches. (Give students a hint if needed: Put calories on the x axis and fat grams on the y axis)

-Provide students with the Line of Best Fit Activity Worksheet and have them complete the task.

-Discuss the correct answers to the mathematical equations and show answers on the board.

Evaluation/Assessment of Student's Competency

Students will turn in their graphs and responses to questions relating to the activity that demonstrates their understanding of the task.

Closure

Ask for students to summarize what they did in this activity. This can be done as a group discussion, or even a journal type activity.

□ Section Two: English

ALT 1: "Daily Meal Journal"

Summary

Students will analyze past eating habits, keep track of daily meals and reflect on their food choices each day, and at the end of the assignment.

Competencies

Students will be able to:

- analyze past eating habits
- record their thoughts and feelings in the form of a paragraph
- understand the elements of journal writing
- understand the importance of limiting fats and empty calories in their diet.

Time

One 45 minute class period-- (10 minutes daily for a week)

Materials

"My Diet" Analysis Worksheet, paper, pen/pencil, copy/diagram of the food pyramid

Instructions

- Students should begin this lesson with a basic understanding of the dangers of a diet high in fat and calories. Display a diagram or poster of the food pyramid, and review what they have learned about proper nutrition in previous lessons. (Instructors can also access information from the FDA's Dietary Guidelines for Americans, www.health.gov/dietaryguidelines/)
- Inform students that they are now going to put their own diet "under the microscope". Distribute the "My Diet" Analysis Worksheet and allow students to respond to the questions on the worksheet.
- Once students have had a chance to analyze a recent meal and complete the analysis worksheet, assign the journal writing process of the assignment.

Explain that students will take approximately 20 minutes each evening during the next week to record their food choices for the day in a journal type entry. The journal is a place for them to describe what they ate and reflect on the good or bad choices they made when putting together their meal. Students should also use the food pyramid and note the servings they are getting for each group. They will also want to include personal feelings and responses to their food choices in their journal.

-Students will share their experiences at the end of the week. Students will then complete a final analysis by answering the following questions as their last journal entry:

- Did you eat enough of each recommended food group each day?
- Which food group did you eat the most of? Least?
- Did your eating habits change over the course of the week?
- What would you say influences you the most when making food choices?
- Summarize your overall experience with keeping track of what you eat each day.
- What are some changes that you can make personally to improve your health?

Evaluation/Assessment of Student's Competency

- Evaluation will be based on the journal writing requirements and the ending entry they write after the class discussion on the last day.

Closure

Close the lesson with students sharing their thoughts on making food choices. Explain that the next lesson is going to address how some food companies/restaurants use persuasive techniques to attract young people to eat their food.

□ **Section Two: English**

ALT 2: "Targeting Teens"

Summary

Students will take a first hand look at the methods companies use to sell junk food, or fast food, products and target teens through advertising. They will also use their understanding of techniques to market their own "product."

Competencies

Students will be able to:

- an awareness of the different techniques applied in selling snack foods.
- a beginning awareness of the format and structure of advertisements
- an understanding of their own reactions, as consumers, to these ads.
- create an advertising slogan using the a variety of persuasive techniques

Time

Two 45 minute class periods

Materials

Food Advertising Strategies handout, paper, pen/pencil, commercial log handout.

Instructions

- In order to begin the lesson, students will need to complete the commercial log handout prior to the class. Students will watch for commercials on television that target young adults and complete the log.
- At the beginning of day one, distribute the Food Advertising Strategies and review as a class. Students will then take their commercial logs and identify which strategies were used to target teens. You can have students share their findings during class discussion, if time allows.

-Divide the class into groups. Instruct them that each group is now an advertising agency. They have been hired to create a commercial, slogan, or ad campaign for a new snack food product. Students can be creative as they want, as long as the new snack food is realistic. Remind them to utilize the techniques they have learned and reviewed.

Outline for group work:

- What is the food product?
- Who is their target market?
- What advertising strategies will they use?

Each group will then present their commercial, or campaign to the class.

Evaluation/Assessment of Student's Competency

- Evaluation will be based on the commercial logs and group presentations.

Closure

Students can end the lesson with peer evaluations of the group presentations and a reflection of the activity.

Alt 2: Math Handout

Line of Best Fit Activity:

Once you have completed your scatterplot, complete the following steps:

1. Using a ruler, draw in your line that best fits these points on the graph.
2. Pick two points away from each other on your line and mark them with an X. Write the (x,y) coordinates on your graph paper next to each of them. Then calculate the slope, m , showing your work!!! Leave your slope in fraction form.
3. Pick a 3rd point $(X1, Y1)$ in between the two points and also ON your line mark it with a star (*) and label its coordinates on your graph paper next to this point.
4. Showing all work, use the Point-Slope Form, $y-y1=m(x-x1)$, to write an equation of your line using your slope, m , and your point $(x1y1)$.
5. Simplify your equation from #5 to Slope Intercept Form, $y=mx+b$.
6. Using your equation for #6, what is the real world meaning of the slope? Y intercept?

Alt 2: Math Handout

Company	Food	Serving Size (oz)	Total Calories	Carbohydrates (gm)	Protein (gm)	Fat (gm)	Cholesterol (mg)	Sodium (mg)
Arby's	Roast Beef	5.5	383	35	22	18	43	936
Burger King	Whooper Jr.	4.7	300	29	14	15	35	500
McDonalds	Hamburger	3.6	255	30	12	9	37	490
Wendy's	Single Hamburger	4.7	262	31	25	15	70	510
Dairy Queen	Grilled Chicken	6.5	300	33	25	8	50	800
Hardee's	Chicken Fillet	6	370	44	19	13	61	640
KFC	Original Recipe Breast	3.6	260	8	25	14	92	609

Alt 1: English Handout

“My Diet Analysis”

What were the lunch choices for the last week?

What did most people you eat with choose for their lunch?

In your opinion, why do you think they made certain food choices?

Why do some students choose to bring their lunch from home?

Describe the lunchtime environment.

Did the food choices fit into the recommended amounts suggested in the food pyramid?

The Food Guide Pyramid: A Guide to Daily Food Choices

Food Group: Bread, Cereal, Rice and Pasta

How many servings does the pyramid recommend? _____

Did you eat more or less of them? _____

Food Group: Vegetable Group

How many servings does the pyramid recommend? _____

Did you eat more or less of them? _____

Fruit Group: Fruit

How many servings does the pyramid recommend? _____

Did you eat more or less of them? _____

Food Group: Milk Yogurt and Cheese

How many servings does the pyramid recommend? _____

Did you eat more or less of them? _____

Food Group: Meat, Poultry, Fish, Dry Beans, Eggs and Nut Group

How many servings does the pyramid recommend? _____

Did you eat more or less of them? _____

Looking At Pieces of the Pyramid

Fats, Oils and Sweets

- What foods do you eat that are found in the small tip of the pyramid?
- Compare the foods that you eat in this part of the pyramid to foods that you eat in the five food categories?
- What percent of your foods are in the fat, oils and sweet category?

Alt 2: English Handout

Food Advertising Strategies

Advertisers have many methods to try and get you to buy their products. Lots of times, what they are selling is a lifestyle, or an image, rather than the product. Here are some tricks of the trade.

Ideal Kids (or families) - always seem perfect. The kids are really hip looking, with the hottest fashions and haircuts, and toys. Ideal families are all attractive and pleasant looking -- and everyone seems to get along! Ideal kids and families represent the types of people that kids watching the ad would like themselves or their families to be.

Family Fun - a product is shown as something that brings families together, or helps them have fun together; all it takes is for mum or dad to bring home the "right" food, and a ho-hum dinner turns into a family party.

Excitement - who could ever have imagined that food could be so much fun? One bite of a snack food and you're surfing in California, or soaring on your skateboard!

Star Power - your favorites sports star or celebrity is telling you that their product is the best! Kids listen, not realizing that the star is being paid to promote the product.

Bandwagon - join the crowd! Don't be left out! Everyone is buying the latest snack food: aren't you?

Repetition - advertisers hope that if you see a product, or hear it's name over and over again, you will be more likely to buy it. Sometimes the same commercial will be repeated over and over again.

Weasel Words - by law, advertisers have to tell the truth, but sometimes, they use words that can mislead viewers. Look for words in commercials like: "Part of..." "The taste of real...." "Natural...." "New, better tasting...." "Because we care..."

Omission - is where advertisers don't give you the full story about their product. For example, when a Pop Tart claims to be "part" of a healthy breakfast, it doesn't mention that the breakfast might still be healthy whether this product is there or not.

Are You Cool Enough? - this is when advertisers try to convince you that if you don't use their products, you are a nerd.

Scale-is when advertisers make a product look bigger or smaller than it actually is.

Put Downs-making another competitor's product look bad in order for yours to look better.

Facts and Figures-using facts and stats to enhance your product's credibility.

Heart Strings-ads that draw you into a story and make you feel good.

Sound effects-music and other sound effects that add to the excitement of the commercial. Like those little jingles you just can't get out of your head!

Cartoon Characters-Kids identify cartoon characters with the product they represent.

Alt 2: English handout

Commercial Log

Name: _____

Your task is to identify at three commercials that target teens and respond to the following questions. In order to complete the task, you will need to watch television!! How hard can that be?

Commercial #1:

What is the name and description of the product that is being advertised?

Describe what takes place during the commercial (the story line, so to speak). Be specific.

Would you say that the commercial is effective in persuading someone to buy the product? Why or why not?

Commercial #2:

What is the name and description of the product that is being advertised?

Describe what takes place during the commercial (the story line, so to speak). Be specific.

Would you say that the commercial is effective in persuading someone to buy the product? Why or why not?

Commercial #3:

What is the name and description of the product that is being advertised?

Describe what takes place during the commercial (the story line, so to speak). Be specific.

Would you say that the commercial is effective in persuading someone to buy the product? Why or why not?

Culminating Activity: "A Campaign for Life"

Summary

Students will take what they have learned about healthy eating, the dangers of junk food, and persuasive techniques to organize a campaign that promotes healthier eating among the teens in their school. Students can choose to campaign in the form of print ads, video announcements, or poster formats.

Competencies

Students will be able to:

- understand the importance of limiting fats and empty calories in their diet.
- demonstrate an understanding of persuasive techniques
- create a campaign to promote healthier living
- work as part of a team to achieve a goal

Time

1-2, 45 minute class periods

Materials

Copy of the food pyramid, computer access, construction paper, markers (additional supplies may be needed if students choose to create a video campaign)

Instructions

- Students should have a basic understanding of the dangers of eating junk food and the long term effects of unhealthy eating.
- Working together in groups, students will create a proposal for a school wide campaign that promotes healthier eating.
- Each group will be responsible for creating a power point presentation that describes the campaign and the techniques they will use to promote it.

-Groups will also want to create a slogan for the campaign and produce a poster, or color flyer to promote the push for healthier eating. Students should use their knowledge of persuasion in creating the slogan and poster.

Evaluation/Assessment of Student's Competency

Each group will present their power point presentation to the class. Teachers can use a rubric to evaluate the power point presentation and campaign slogan/posters together or separate. Go to www.rubistar.org for a basic presentation rubric.

Closure

Have students reflect on their experience with the project and discuss how they will make life long changes based on what they have learned.

Appendix One: (Title)

You may include additional documentation, such as answer keys to assessment tools, additional references, etc., which may be useful in facilitating delivery of this curriculum unit.

Be sure to clearly title each appendix item, and reference in the respective descriptive section of the unit.