Dining Out: A Nutrition Activity

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Abstract

Dining out is an increasing trend among American youth.

Objectives: The purpose of this teaching technique is to present an interactive, nutritional education activity that is focused on developing healthy food-selection skills, and reducing calorie consumption, among youth when they dine outside of the home.

Target Audience: Although this activity is geared toward adolescents, i.e., students typically between 13 and 19 years of age, it can be adjusted for younger and older students.
INTRODUCTION

The trend of dining in restaurants and fast-food establishments has increased in the past three decades. In 2000, the average American ate outside the home about four times per week, and this trend has continued to climb. Consumer spending at full-service and fast-food restaurants is predicted to rise by approximately 18% and 6% respectively between 2000-2020. As the general population’s dependency on externally-prepared food surges, it is not unreasonable to predict that direct control over the nutritional content within foods consumed will decrease.

Fast-food consumption increased fivefold from 1977 to 1995 among 2- to 18-year-olds. Almost one-third of all youth now eat at fast-food restaurants on any given day. Furthermore, the average college student now purports “eating out” six to eight times per week. Young adults who frequently eat fast-food gain more weight and have a greater increase in insulin resistance in early middle age.

Although causes of obesity are multi-factorial, weight gain ultimately results from an imbalance between energy intake and energy expenditure. One key factor that influences this balance is type of diet. For nutrition education, it is critical to educate individuals on healthier food options, whether it is cooking at home or eating out. Dining out poses unique challenges to consumers who are health- and/or weight-conscious. This interactive activity allows participants to gain knowledge and practice skills necessary to make healthy food choices while still enjoying the experience of dining out. The authors have included student antidotal evidence of the effectiveness of this teaching activity.

OBJECTIVES

Students who complete this lesson will be able to:

- differentiate between healthy- and poor-food choices when dining out and
- devise strategies to reduce total calorie consumption when selecting a meal.

MATERIALS AND RESOURCES

- Dry erase board and markers and pens or pencils.
- Various menus from restaurants; full-service and fast-food menus should be acquired by the instructor or students prior to this activity. (Note to the instructor: Many restaurant establishments will donate menus if asked or ask students to bring menus from their favorite eating place.)
- Copies of “Dining Out” quiz (with answers removed) provided in Figure 1. For younger students, some of the terminology in the quiz might need adjusting for better clarification. Each individual instructor should make adaptations to fit his/her students’ developmental levels.
- Copy of Lecture notes on “Dining Out: A Nutrition Activity” for the instructor provided in Figure 2.
- Copies of Activity Worksheet in Figure 3.

TARGET AUDIENCE

This lesson is designed for health education or physical education classes for middle- and high-school students attending after-school programs or in health or exercise classes at the university level.

PROCEDURE

The activity will take approximately 30-60 minutes and it will be most effective when students are not rushed. Adequate time should be allotted for each following phase. Students appreciate time to explore menu options, recount personal stories of restaurant experiences, and weigh menu options. The instructor should be prepared to move between groups (See first sentence under Activity) to overhear information shared. Misinformation can be revisited and corrected during the general discussion time. Authors purposefully have not designed a grading system or rubric because this activity is viewed as an experiential learning piece. The strength of experiential learning is learning through reflection, for which this activity allows ample opportunity.

Before the lesson, require students to:

- bring menus from restaurants they commonly frequent. Have additional menus available. Collect menus after the activity to augment the supply for the next time this activity is taught.
- complete the “Dining Out” quiz as a pretest (Figure 1).
Open with discussion:

- Ask students what foods served at restaurants that they think are healthy and unhealthy. Keep a record of students’ remarks on the dry erase board. The instructor may choose a student to help record remarks so that the discussion keeps flowing.

Brief Lecture:

- Use lecture notes (Figure 2) to present healthy dining out strategies people may use. Ask students for additional tips they may have previously used to reduce calories. Assess the nutritional accuracy of the suggestions and make corrections as necessary.

Activity:

Assign students into groups of up to four members and distribute menus. Ideally, each group member should have the same menu; they could share menus if not enough menus are available. Before group work begins, the instructor, using a different restaurant menu, should model/demonstrate ideal food selection behavior and check for student comprehension (refer to Figure 2 for healthful eating tips). The goal for each group is to choose the most healthy and least healthy appetizer, entrée, and beverage on their menu. To facilitate this process, ask group members to complete the worksheet (Figure 3). When each group has finished, orchestrate the following tasks:

- In a round robin format, have one spokesperson from each group share what s/he believes are the most healthy and least healthy foods on his/her particular menu.
- Ask group members to devise strategies to reduce calories of the least healthy selections (i.e., if one truly wants chili cheese fries, what can one do to reduce total calorie consumption? Student answers might include any of the following options: order water instead of soda with it; ask for a half order or share it with a friend; hold the cheese; have the sauces on the side [so you control how much is put on the dish], and so on).
- From group brainstorming and reporting, compile a list of correct calorie reduction strategies to use while dining out (refer to Figure 2). As an independent practice opportunity, require students to complete the assessment assignment.

Debrief:

The importance of this activity is not only for students to understand how to reduce calorie consumption while dining out, but to actually implement what they learned. The debriefing stage should be focused on strategies that students can commit to using. To facilitate this portion, the instructor could pose the following questions:

- To control caloric intake, what do you think are the most realistic strategies to use when dining out?
- Of the restaurants at which you eat, which would be more challenging to use healthy-choice strategies and why?
- If you were to adopt some of these strategies, how might your parents or friends react? How would their reactions make you feel? Based on their reaction, would that make you change your selection?

Instruct students to complete the “Dining Out” quiz (Figure 1) as a posttest at the end of the debriefing period—not for a grade but for a way to ascertain change in knowledge among the students. Some of the quiz questions could be open to interpretation. Students may have valid reasons for selecting a particular option over the other and these questions could be the impetus for discussion.

ASSESSMENT TECHNIQUE

Dining out can be challenging for students concerned with selecting healthy food. Although the pre/post “Dining Out” quiz will help determine what students have learned and retained, an independent practice assignment might be added to assess implementation of this knowledge. One way to assess students’ food choices is to have them write a one-page paper on their next dining-out experience, which would be an after-class assignment. In this paper, require students to address the following questions:

1. To what restaurant did you go?
2. Were you alone or with other people?
3. Did you order what you initially wanted or change your mind when it came time to order? If you did change from what you originally wanted, was it a positive or negative change? (Explain your answer)
4. Did you implement any of the calorie-reduction strategies generated by the class? If so, what strategies did you use, and was it harder or easier to do than you anticipated?
5. What was your beverage selection?
6. What was everyone else eating? Did anyone comment about your selection? If so, what was said?
7. Did you eat your entire meal or did you take part of your meal home?

After this exercise, ask students to share their responses with the class.

Another way to assess students' food choices could be to organize a group lunch at the school cafeteria. Selecting foods in the cafeteria can be challenging when trying to make healthy selections; however, more than one main dish is typically offered, with at least one dish a healthier option. Observing a cafeteria lunch would provide awareness of the interaction between the students and food-service personnel. For example, the teacher might observe if the student asks the food-service personnel for a smaller portion or to have the dressing and/or condiments placed on the side. An informal debriefing after the group lunch is ideal.

Knowing what constitutes healthy-food choices does not insure students' food selections when dining outside the home. Student choices may not change overnight; it is important, therefore, to continue to emphasis that small dietary changes over a period of time can make a significant difference in personal health. Moreover, the teacher may ask students strategic healthy-food-choice question throughout the week or months. For example, on Monday mornings, a teacher might ask, “Who eat out at a restaurant this weekend, and what did you have?” “Did you use any of the healthy-food choices techniques we talked about?” Or, the teacher may follow up during the week before students’ lunch period by letting the students know the food options for lunch that day and asking them, “Which selections today sound healthy?” Or perhaps with older students, the teacher may ask, “Can you modify today selections to reduce some of the calories?” Little reminders will help students be more conscious of their choices and help them develop healthy habits.
REFERENCES


Figure 1: Pre/Post Dining Out Quiz

Dining Out Quiz: Please circle the letter next to the correct answer.

1. Which strategy should help decrease the number of calories when dining out?
   a. Sharing an entree
   b. Drinking sweet tea instead of soda
   c. Ordering the loaded baked potato instead of French fries
   d. Ordering breaded fish instead of fried fish

2. If a person is watching his or her fat intake, which meat is a leaner choice?
   a. Filet Mignon
   b. Fried Fish Filet
   c. Baked Chicken Thigh
   d. Baked Chicken Breast

3. Which of the following is a true statement about fast food restaurants?
   a. Fish is always a low-calorie choice.
   b. Croissants, biscuits, and muffins are high in calories.
   c. The regular burger usually has the same number of calories as the largest size.
   d. Side dishes, such as French fries or potato salad, typically have fewer calories than the main dish.

4. Which of the following is recommended when trying to reduce caloric intake?
   a. Sweet tea instead of soda
   b. Fried entrée instead of grilled entrée
   c. Order salad dressing on the side
   d. Marinara sauce instead alfredo sauce

5. Which appetizer has the fewest number of calories?
   a. Cheesy potato soup

6. When assessing how food is prepared in a restaurant, which of the following is considered the healthiest?
   a. Fried
   b. Baked
   c. Sautéed
   d. Breaded

7. When selecting vegetables with an entrée, which of the following has the fewest number of calories?
   a. Sautéed broccoli
   b. Cream of spinach
   c. Steamed asparagus
   d. Side salad with cheese and croutons

8. Which beverage provides the least number of calories per serving?
   a. Soda
   b. Sweet tea
   c. Lemonade
   d. Sparkling water

9. Which dessert provides the least number of calories per serving?
   a. Cheesecake
   b. Blueberry pie
   c. Vanilla ice cream
   d. Blackberry cobbler

10. When selecting a soup, which of the following has the fewest calories?
    a. Lobster Bisque
    b. Minestrone Soup
    c. Broccoli and Cheddar Soup
    d. French Onion Soup

I. Objectives

Students who complete this lesson will be able to:

a. differentiate between healthy- and poor-food choices when dining out and
b. devise strategies to reduce total calorie consumption when selecting a meal.

II. Have a “Dining Out” Plan

Do not go out to eat just because you happen to drive past a restaurant. Go out to enjoy the food and socialize with friends. Make dining out more of a special occasion than a daily routine. Consider your daily caloric intake and plan your day accordingly (refer to My Pyramid.gov for recommended calorie intake by age and gender). For example, if you plan on eating out for dinner, have a lighter lunch. Do not skip meals before eating out because you may feel more hungry and likely cause you to overeat.

III. Ordering Tips

a. Always order regular portions sizes: Try not to super-size your meal. Certain restaurants are known for their large portion sizes, so consider sharing your meal with a friend.

b. Order separately: Restaurant personnel are used to special orders, so do not be shy about asking for certain foods to be substituted for those that are not as healthy. For example, instead of ordering both beans and rice with your burrito, ask for one or the other. Approximately 200 calories will be saved by this practice. If a meal comes with fries, ask if you can substitute a healthier side dish, such as steamed vegetables or a side salad. This substitution could save you nearly 300 calories!

c. Ask how dishes are prepared: If a food is fried, ask if it can be grilled instead. For example, ordering a grilled chicken breast sandwich over a fried chicken breast sandwich can save you 198 calories. Ask for your vegetables to be steamed and served “dry.” You can have the sauces and dressings served on the side in order to control the amount you eat.

d. Don’t tempt yourself: After you have had a small portion of chips, peanuts, or the basket of bread, ask the waiter to remove them from the table. Calories from nibbling can add up before you know it. For example, 1 ounce of chips has 140 calories; 1 ounce of peanuts provide 170 calories; and a piece of French bread has 277 calories. Also, do not sit near the dessert cart.

e. Learn to spot: Know which dishes are made with lower/higher calorie cooking methods. For example, fried versus grilled, steamed or poached.

f. Ask for nutritional information: In many restaurants, detailed nutritional information for menu items is available. Ask for this information to make choice selection easier.

g. For college students who are of legal age to consume alcohol: Limit alcohol: Alcohol is high in calories, has few nutrients, and can weaken your will power leading you to overeat. A light 12-ounce beer has 105 calories, and a 12-ounce regular beer provides approximately 146 calories. Wine provides an estimated 96 calories for a 4 ounce glass.

IV. Low Calorie Menu Choices

To help you stay within your healthy eating plan, the following foods and methods of preparation are likely the best choices.

a. Clear broth-based soups like Chinese won ton or hot and sour soup, consommé, tortilla soup, or minestrone.

b. Romaine lettuce or spinach salads with vegetables and dressing on the side. Go easy on the bacon bits, croutons, cheese, and mayonnaise-based items like macaroni salad or tuna salad (1/4 cup tuna salad = 190 calories).
c. Raw **vegetables** (crudités) with a small amount of low-calorie dip.

d. **Steamed** vegetables with a slice of lemon or grilled veggies rather than those drenched in oil or butter.

e. **Meats** that are grilled, broiled, roasted or baked without added fat. Choose **seafood** that is broiled, baked, steamed, blackened, or poached—think tender sole poached in parchment with broth, savory vegetables and herbs.

f. A reasonable portion of **steak** – 3-4 ozs. (size of a deck of cards) will provide approximately 300-350 calories; other lean meat cuts served au jus, with a piquant fruit sauce, or stir-fried with vegetables. Again, go easy on the rich, creamy sauces.

g. A baked **potato** with a pat of butter (1 teaspoon equals 34 calories) or small amount of sour cream (1 Tablespoon equals 23 calories). Top with broccoli, low-fat chili, or salsa.

h. **Choosing sandwiches** on whole wheat or multigrain breads will provide additional essential nutrients, like fiber, when compared to white-flour bread products; with low-fat deli meats and cheeses, use mustard, relish, ketchup, or low-fat mayonnaise. Add flavor and vitamins with roasted sweet peppers, romaine lettuce or spinach, tomato, jalapenos, and chopped olives (small amount).

V. **Hidden Calories:** Look for the following descriptions to uncover higher calorie menu choices: pan-fried, sautéed, battered, breaded, au gratin, cheesy, creamy, buttered, deep-fried, béarnaise, or crispy—as in the "crispy," **deep-fried** tortilla bowl holding the salad.
Figure 3: Dining Out: A Nutrition Activity Worksheet

Restaurant: _______________________________

<table>
<thead>
<tr>
<th>Most Healthy Choice</th>
<th>Least Healthy Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appetizer:</td>
<td></td>
</tr>
<tr>
<td>Entrée:</td>
<td></td>
</tr>
<tr>
<td>Beverages:</td>
<td></td>
</tr>
</tbody>
</table>

Given the choices above, modify your least healthy choice by either size or additions.

Modify:

________________     Appetizer
________________     Entrée
________________     Beverage

"To eat is a necessity, but to eat intelligently is an art" (La Rochefoucauld 1613-1680).
Integrating Music into the Health Classroom: A Resource for Health Teachers

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Abstract

Results from research have shown that using music in the classroom can have a positive effect on student learning.

Objectives: This teaching idea will allow health teachers to 1) access appropriate music/songs for teaching health content areas and 2) integrate music into health classes as a means of accompanying or teaching health topics.

Target Audience: This resource is designed for middle- and high-school health teachers.
INTRODUCTION

Music is part of daily life; however, “music . . . is not a simple distraction or pastime, but . . . an activity that paves the way for more complex behaviors such as language, large scale cooperative undertakings and the passing down of important information from one generation to the next.” 3(p. 3) Results from research have shown that, in general, music can be used in a variety of ways in the classroom bringing joy and having a positive effect on students’ and teachers’ learning. More specifically, for students, music influences learning relative to physical, intellectual, emotional and social dimensions of health. 2, 3 For teachers, music can be used to accessorize a lesson or play a team-teacher role to assist with lesson delivery by guiding, directing, or supporting learning. Music can be used to accompany a lesson or it can be used to address specific health content (e.g., a song in which body image is addressed), introduce health topics (e.g., dealing with loss, recognizing unhealthy relationships), provide unique learning activities (e.g., discographies, jingles), and set a specific class atmosphere. 4

Music’s influence on the body and mind

Music invites the whole brain and body into the learning process and increases blood flow to the brain. 5, 7 As a result, rhythms tap into the left hemisphere and melodies activate the right hemisphere. 8, 10 Furthermore, different types of music can ignite different parts of the brain. Music even can change brain waves causing new neuron production. 8, 11 Intellectually, this new neuron production influenced by music can result in new learning. 8, 11 Music can help stimulate cognitive functions like memory and recall. 8, 12, 13 As Sacks (2008) pointed out, music can be “as educational as reading and writing.” 11(p. 102)

Music also can arouse emotional responses. For example, major chords may sound more pleasant and minor chords may sound more “dark” or unpleasant. 12, 14 As music raises emotion, it can bring people together socially. In a classroom setting, the ability of the sounds of music to enhance students’ social skills is important. 8, 15

Physiologically, music can affect heart rate, the immune system, and metabolism. For example, fast music can increase heart rate and breathing, while slower music can elicit a calming effect of the body. 6 In particular, calm music can help reduce stress, which can have a positive influence on the immune system, and fast music can be used to raise energy and metabolism. 5, 7, 16

OBJECTIVES

After reading this teaching idea, health teachers will be able to 1) access appropriate music/songs for teaching health content areas and 2) integrate music into lessons as a means of accompanying or teaching health topics. This teaching idea is designed for middle- and high-school health teachers.

In order to effectively integrate music into their health classes, teachers need to first:

- assess which health topics they believe will be enhanced by using music;
- review music resources available (see tables 1 – 3 for suggestions);
- ask for input from students and colleagues regarding appropriate music selections;
- plan for the effective integration of selected music into specific classes.

MATERIALS AND RESOURCES

- Table 1
- Table 2
- Table 3

TARGET AUDIENCE

This teaching idea is designed for middle- and high-school health teachers.

PROCEDURES

The following examples involve methods and materials that can be used to incorporate music into the health classroom (e.g., opening a lesson, stimulating discussion, remembering important terms, and understanding health topics from past generations). If integrating music into a PowerPoint presentation, be sure to save the presentation and the music files to the data source (e.g., jump drive), or the music will not play.

One example of incorporating a specific song into a health topic is to open a lesson about body image with the song from En Vogue entitled, “Can Anybody Hear Me?” As students enter the classroom, this song is played in the background as the teacher oversees a series of quotes and pictures about body image scrolled on a PowerPoint presentation. After the PowerPoint, students are asked to think-pair-share their reactions to the quotes and pictures. Students then listen to the song again without the PowerPoint presentation and share ways in which the song’s lyrics relate to body image and how that song may have
Integrating Music into the Health Classroom

Impact and integration of music in the health classroom. The lesson concludes with a discussion about the influence of various types of music on knowledge, attitudes, and behaviors regarding body image.

Music also can be used to stimulate discussion and inspire reflection about sensitive issues and provide a common bond for communication and perspective-taking. For example, students of later generations can learn about the HIV/AIDS through music (e.g., “Philadelphia” by Neil Young and “Streets of Philadelphia” by Bruce Springsteen in 1994, or “That’s What Friends Are For” written by Burt Bacharach and Carole Bayer Sager, 1982). The songs are played in class and students analyze the lyrics to compare changes in societal attitudes towards HIV/AIDS throughout the years. One online source that students could use to complete this assignment is AVERTING HIV and AIDS, the international HIV and AIDS charity website. The historical section of this site contains six timelines about HIV/AIDS (e.g., up to 1986, 1987-1992, 1993-1997, 1998-2002, 2003-2006 and 2007 to the present). Each timeline provides students with societal attitudes toward HIV to compare with HIV-related songs of that era.

Teachers and students alike can promote content-specific connections to learning by using the same strategies as those used in media campaigns to influence consumers. Cleverly crafted jingles can assist students to remember content by adapting popular advertising tunes to include health topics. For example, the F.I.T.T. (Frequency, Intensity, Time and Type) principles can be integrated into the Almond Joy jingle: “Sometimes you feel like a nut, sometimes you don’t. Almond Joy’s got nuts, Mounds don’t; because sometimes you feel like a nut, sometimes you don’t.” The jingle integrated with the F.I.T.T. principles could be: “Sometimes you feel like working out, sometimes you don’t. Using F.I.T.T. can help, when you don’t. It’s got frequency, intensity, type and time. And you’ll remember it, with this rhyme. Because, sometimes you feel like working out, sometimes you don’t.”

Content specific connections also can be made in a group activity when students are asked to identify a song that all members of the group know (e.g., Twinkle Little Star). The teacher then can provide a list of critical terms or theoretical concepts (e.g., six nutrients; decision-making steps) and require students to develop their own lyrics to the song using these terms and concepts. Similarly, the health teacher can infuse important terms into a familiar tune. For example, the health teacher could lead students in performing his/her own version of the “Muscle Macarena” to help students learn major muscle groups using the song, “Macarena.”

Additionally, students can delve deeper into a health topic by compiling a discography or musical biography. These discographies, or selections of music, can be used to describe a certain era in history (e.g., Roaring 20s and Prohibition, 1960s and illicit drugs). For example, students could review music and lyrics from songs in the Roaring 20s Jazz-Ragtime Age that reflected a rebellion to Prohibition and conservatism. Songs like, “Alexander’s Ragtime Band” were the rage as young people frequented “speakeasies” (i.e. nightclubs that sold alcohol illegally during Prohibition in the U.S.) to drink alcohol and smoke cigarettes. Students also could create discographies of 1960s music (e.g., Bob Dylan, Janis Joplin, Grateful Dead, Jefferson Airplane and music performed at the 1969 Woodstock Music Festival) to analyze substance use at a time in history when society was wrestling with attitudes about the Vietnam War, civil rights, and sexuality.

Music can be used in a health class in many ways and in all ten content areas of a comprehensive school health education curriculum (aging and death education, consumer health, diseases, environmental health, fitness, mental and emotional health, nutrition, safety, sexuality and substances). Music selections for each health content area are provided in Table 1.

Although music can be used to address specific content, there are other ways to include music in a classroom as shown in Table 3. As previously mentioned, music can provide a dynamic or calming atmosphere, an interesting background, or set the perfect tone for a particular topic. A carefully chosen song also can be used to start a class by highlighting a special school event, celebrating a student’s birthday, recognizing a national holiday, noting the change in the weather and seasons or paying tribute to a significant historical event or figure. Health teachers need to be sensitive, however, to which celebrations are culturally appropriate for their students. Furthermore, teachers can show their support and empathy for what students are experiencing at school and in their lives with specially selected walk-in music. For teachers who believe they have become ‘decade-challenged’ and, therefore, need help becoming updated, there are several compilations of top music hits published annually for purchase (e.g., Grammy nominees CD, Now That’s What I Call Music” CD collections).
ASSESSMENT TECHNIQUES

The following assessments accompany each of the objectives for this teaching technique. Rather than graded assignments, these assessments are focused on obtaining student input and teacher reflection on the impact of music in the classroom.

Objective 1: To assess their own ability to access appropriate music, health teachers could develop a personal music collection that is culturally appropriate and sensitive to the needs of their students. Included in this personal collection should be several music pieces to address each of the health content areas.

Objective 2: To assess the effectiveness of integrating music into the health class, the health teacher should a) gather input from students and b) self reflect.

a) Depending upon how music was integrated into the health class, the health teacher could solicit input from students about the effectiveness of integrating music by:

- posing the following question at the end of a health lesson and/or unit: To what extent did you enjoy the way music was used? Or, do you believe that the music used contributed to your ability to learn about the health topic? (scale of 1-5, 5=Very much, 1=Not at all)
- requiring students to journal or free write about whether they enjoyed how music was used or if the use of music helped them learn the content. Journal responses should be graded on a 5 point rubric (5= answers to questions were fully supported with rationale and examples), 1= little or no answers were supported with rationale or examples)
- gaining input on the intellectual, environmental, social, emotional and physical reasons for using music by asking students to complete a survey about whether they:
  - were able to recall health terms by creating lyrics to a familiar tune using these health terms (e.g., insert H1N1 prevention tips into the song, ‘Twinkle Little Star’) (intellectual).
  - enjoyed hearing music related to the health topic in the background (e.g., having “Food, Glorious Food” in the background while working on healthy nutrition posters) (class environment).
  - thought that music helped stimulate their group discussion about a health topic (e.g., listening to ‘Can Anybody Hear Me’ by EnVogue to discuss body image) (social/emotional).
  - performed accompanying actions to a familiar song to learn health content (e.g., perform the ‘Muscle Macarena’ by pointing to muscles as they are named in the song) (physical).

b) Depending upon how music was integrated into a health lesson and/or unit, the health teacher could self reflect by noting after the lesson and/or unit plan whether it appeared that the music:

- was received positively or negatively by the students (e.g., facial; or verbal reactions).
- contributed or distracted from student learning (e.g., students completed tasks or were not able to concentrate on tasks because of the music).
- increased active participation in music-related learning activities (e.g., whether students analyzed, wrote and/or performed lyrics to songs).
REFERENCES

Table 1: General Classroom Music Resources

<table>
<thead>
<tr>
<th><strong>Elementary Classroom songs</strong></th>
<th><strong>Finding songs, artists, lyrics or jingles</strong></th>
</tr>
</thead>
</table>

**Holiday songs**
- [http://www.ilovewavs.com/Holidays](http://www.ilovewavs.com/Holidays) Selections for all holidays, game shows, movies, sound effects, commercials & same songs by different artists

**Learning with Music sites**
- [http://www.musicandlearning.com](http://www.musicandlearning.com) Music for all ages, no downloads
- [http://www.learningfromlyrics.org/songsatoi.html](http://www.learningfromlyrics.org/songsatoi.html) Songs for classroom, no downloads
- [http://www.newhorizons.org/strategies/arts/brewer.htm](http://www.newhorizons.org/strategies/arts/brewer.htm) Rationale for music in classroom-C. Boyd Brewer
- [http://www.songsforteaching.com/ericjensen/2.htm](http://www.songsforteaching.com/ericjensen/2.htm) Rationale for music in classroom-E. Jensen
- [http://www.teachingenglish.org.uk/talk/questions/using-music-classroom](http://www.teachingenglish.org.uk/talk/questions/using-music-classroom) Quotes from teachers all over world about how they used background music in class for teenagers

**School songs**

**Weather songs**
Table 2: Examples of Using Music in Health Education

<table>
<thead>
<tr>
<th>Substances</th>
<th>Mental/Emotional</th>
<th>Diseases</th>
<th>Consumer Health</th>
<th>Nutrition/Body image</th>
</tr>
</thead>
</table>
| • I Want a New Drug: H. Lewis (alternative highs)  
• Cocaine: A. Clapton (anti: cocaine)  
• Stupid Girls: Pink (lack of positive role models for girls)  
• Smokin’ in the Boys Room: Brownsville Station  | • Don’t Go Chasin’ Waterfalls: TLC  
• Any Dream Will Do: A. Lloyd Weber (sleep)  
• Who are You: The Who (self: awareness)  
• If I Could Write a Letter to Me: B. Paisley (self: concept)  
• Lean on Me: B. Withers (self: esteem)  
• Beautiful Day:U2  
• Perfect Day: Hoku  
• Had a Bad Day:D. Powter | • I Run for Life: M. Etheridge (cancer)  
• Just Stand Up to Cancer CD  
• That’s What Friends Are For: D. Warwick/E. John (HIV) | • The Credit Card Song: D. Feller  
• Livin’ Within My Means: Common Bond | • Can Anybody Hear Me: En Vogue (body image)  
• Body I Occupy: Naked Bros Band (body image)  
• Soulful Journey CD: L. Daily (body image)  
• Food Glorious Food: Oliver the Musical  
• Strawberry Fields Forever: Beatles  
• Blueberry Hill: Fats Domino |
Table 3: Examples of General Use of Music in Teaching

<table>
<thead>
<tr>
<th>Beginnings/Endings of Class /Year</th>
<th>Seasons and Weather</th>
<th>Management/Competition</th>
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<td><strong>Beginnings</strong></td>
<td><strong>Summer &amp; Sunshine</strong></td>
<td><strong>Spring &amp; Rain</strong></td>
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<tr>
<td>Getting to Know You: The King &amp; I</td>
<td>Here Comes the Sun: Beatles</td>
<td>Raindrops Keep Fallin’ On My Head: BJ Thomas</td>
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<td>musical</td>
<td>Walkin’ on Sunshine: Katrina &amp; the Waves</td>
<td>Love the Rainy Nights: E. Rabbitt</td>
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<tr>
<td>Hello, Goodbye: Beatles</td>
<td>Warmth of the Sun, All Summer Long: Beach Boys</td>
<td>Ain’t No Sunshine: B. Withers</td>
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<tr>
<td>Start Me Up: Rolling Stones</td>
<td>Cruel Summer: Ace of Base</td>
<td>Here Comes the Rain Again: Eurythemics</td>
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<tr>
<td>ABC: Jackson 5</td>
<td>Summer in the City: Lovin’ Spoonful</td>
<td>Listen to the Rain: S. Nicks</td>
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<td>Monday, Monday: Mamas &amp; Papas</td>
<td>Take Me Out to the Ballgame: Harry Carey tribute CD</td>
<td>Purple Rain: Prince</td>
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<td><strong>Endings</strong></td>
<td><strong>Fall</strong></td>
<td><strong>Class Management</strong></td>
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<td>Walk on By: D. Warwick</td>
<td>4 Seasons: Vivaldi</td>
<td>I Know What You’re Doin’: Dion Farris</td>
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<tr>
<td>Walk On: U2</td>
<td>Autumn: G. Winston</td>
<td>100 All: time TV Themes CD (class station rotation)</td>
</tr>
<tr>
<td>On the Road Again: W. Nelson</td>
<td>Winter &amp; Snow</td>
<td>Sound Health Series CDs: <a href="http://www.adbancedbrain.com">www.adbancedbrain.com</a></td>
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<tr>
<td>Boots Made for Walkin’: N. Sinatra</td>
<td>Winter Wonderland, Let It Snow, Frosty the Snowman (Various artists)</td>
<td><strong>Class Competitions</strong></td>
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<tr>
<td>Break My Stride: Ace of Base</td>
<td>If We Make it to December: M. Haggard</td>
<td>We are the Champions: Queen</td>
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<td>Never Can Say Goodbye: Jackson 5</td>
<td>Ice Ice Baby: Vanilla Ice</td>
<td>Winner Takes it All: Abba</td>
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<td>Last Dance: D. Summer</td>
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<td>Rock and Roll Part 2: G. Glitter</td>
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<td>School’s Out: A. Cooper</td>
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<td>We will Rock You: Queen</td>
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<td>I’ve Had the Time of My Life: Dirty Dancing</td>
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<td>Glory Days: B. Springsteen</td>
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<td>See You in September: Happenings</td>
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<td>Game Shows &amp; Jingles: <a href="http://www.televisiontunes.com">www.televisiontunes.com</a></td>
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<tr>
<td>Go Your Own Way: Fleetwood Mac</td>
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Table 3: Examples of General Use of Music in Teaching (continued)

<table>
<thead>
<tr>
<th>Motivation/Relaxation</th>
<th>General Celebrations</th>
<th>Celebrations</th>
<th>School/National Holidays/Events</th>
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<tr>
<td><strong>Motivation</strong></td>
<td><strong>General Celebrations</strong></td>
<td><strong>Celebrations</strong></td>
<td><strong>School</strong></td>
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<td>Eye of the Tiger: Survivor</td>
<td>Celebrate: Three Dog Night</td>
<td>Where Were You: A Jackson (9/11)</td>
<td>Fight Songs: (Various artists)</td>
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<tr>
<td>Gonna Fly Now: B. Conti</td>
<td>Celebration: Commodores</td>
<td>This Land is Your Land (Various artists)</td>
<td>Be True to Your School: Beach Boys</td>
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<tr>
<td>Ain’t No Mountain High Enough: D. Ross</td>
<td>Good Times: Chic</td>
<td>Hero: M. Carey</td>
<td>School Spirit: K. West</td>
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<tr>
<td>The Climb: M. Cyrus</td>
<td>Group cheer: ilovewavs.com</td>
<td>Coming to America: N. Diamond</td>
<td>High School the Musical CD’s: (Various Artists)</td>
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<tr>
<td>Let the River Run: C. Simon</td>
<td><strong>Birthdays</strong></td>
<td>4th of July Marches: J.P. Sousa</td>
<td>Sports &amp; Novelty Themes: B. Morganstein Productions</td>
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<tr>
<td>Sirius: Alan Parsons Project</td>
<td></td>
<td>Born in the USA: B. Springsteen</td>
<td>College Fight Songs: <a href="http://www.amazon.com">www.amazon.com</a></td>
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<tr>
<td>The Power: Snap!</td>
<td><strong>Relaxation/</strong></td>
<td>Proud to be an American: L. Greenwood</td>
<td>Seasonal Holidays</td>
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<tr>
<td>I’m So Excited: Pointer Sisters</td>
<td></td>
<td>Blowin’ in the Wind: Peter, Paul &amp; Mary (Vietnam)</td>
<td>Thanksgiving Day: D. Henley</td>
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<tr>
<td><strong>Relaxation/</strong></td>
<td><strong>General Celebrations</strong></td>
<td><strong>Celebrations</strong></td>
<td><strong>School</strong></td>
</tr>
<tr>
<td>Greatest Hits: Clannad</td>
<td><strong>Birthdays</strong></td>
<td>Where Were You: A Jackson (9/11)</td>
<td>Fight Songs: (Various artists)</td>
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<tr>
<td>Orrinocho Flow: Enya</td>
<td></td>
<td>This Land is Your Land</td>
<td>Be True to Your School: Beach Boys</td>
</tr>
<tr>
<td>Destiny, Picture This: J. Brickman</td>
<td></td>
<td>(Various artists)</td>
<td>School Spirit: K. West</td>
</tr>
<tr>
<td><strong>School</strong></td>
<td></td>
<td>Hero: M. Carey</td>
<td>High School the Musical CD’s: (Various Artists)</td>
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<td><strong>Holidays/Events</strong></td>
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<td>Coming to America: N. Diamond</td>
<td>Sports &amp; Novelty Themes: B. Morganstein Productions</td>
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<tr>
<td>Born in the USA: B. Springsteen</td>
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<td>Seasonal Holidays</td>
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<tr>
<td>Proud to be an American: L. Greenwood</td>
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<td>Proud to be an American: L. Greenwood</td>
<td>Holiday: Madonna</td>
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<td>Blowin’ in the Wind: Peter, Paul &amp; Mary (Vietnam)</td>
<td></td>
<td>Blowin’ in the Wind: Peter, Paul &amp; Mary (Vietnam)</td>
<td>Jingle Bells, Sleigh Ride, Jingle Bell Rock, Baby It’s Cold Outside (Various artists)</td>
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<tr>
<td>Abraham, Martin &amp; John: Dion</td>
<td></td>
<td>Abraham, Martin &amp; John: Dion</td>
<td>Valentine: J. Brickman &amp; M. McBride, My Funny Valentine (Various artists)</td>
</tr>
<tr>
<td>(assassination)</td>
<td></td>
<td>(assassination)</td>
<td>When Irish Eyes are Smiling, Oh Danny Boy (Various artists)</td>
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</table>
Making Healthier Choices To Combat Atherosclerosis

Mira Jane Borders, MST, MSN

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Submitted December 12, 2010

Abstract

Regular exercise and a healthy diet help keep artery walls clear from plaque formations so that blood flows easily throughout the body. Healthy arteries are important because plaque leads to several of the top causes of death in the United States.1-4

Objectives: Students engaged in this teaching activity will comprehend concepts related to health promotion and demonstrate the ability to use interpersonal communication skills and decision-making skills to enhance health.5

Target audience: Sixth- through eighth-grade students.
INTRODUCTION

Given the convenience of eating “fast food” and the enjoyment that electronic devices have brought to young people in the United States, it is not surprising that the number of overweight children has tripled over the last 30 years. 1 High-fat diets and sedentary forms of entertainment in which many children engage frequently lead to a variety of negative health conditions. Without efforts to train students to exercise regularly and to eat well balanced, low-fat diets, plaque deposits begin to form at an accelerated rate in the arteries. After time, these plaque formations impede blood flow throughout the body. When blood flow becomes blocked and organs are deprived of oxygen, dangerous situations such as heart attacks and strokes result. 2,3

OBJECTIVES

As a result of participating in this teaching activity, students will meet several national standards (Figure 1) and students will:

- participate in a hands-on activity that demonstrates the flow of blood through arteries and thereby, comprehend concepts related to health promotion. 5
- present requested information related to unhealthy dietary or exercise behaviors and thereby, demonstrate the ability to use interpersonal communication skills to enhance health. 5
- complete a worksheet that provides solutions to unhealthy dietary or exercise behaviors and thereby, demonstrate the ability to use decision-making skills to enhance health. 5

TARGET AUDIENCE

This lesson was created for use with students in the sixth- through eighth-grade and could be used to reinforce instruction on the benefits of proper nutrition and regular exercise.

MATERIALS AND RESOURCES

- Correlation of objectives to national standards (Figure 1)
- Anticipatory set for the lesson (Figure 2)
- Pre-written unhealthy character scenario (Figure 3)
- Plastic upright container similar to a 2 lb coffee canister
- Four square bean bags no larger than 3 x 3 inches
- Six clothes pin, clip-like kitchen magnets
- Pre-written healthy character scenario (Figure 4)
- Set of paired unhealthy behavior activity cards (captions in Figure 5)
- Six sets of healthy solution activity cards (captions in Figure 6)
- “Record-Keeping Data from Presentations” worksheet (Figure 7)
- “Fighting Atherosclerosis” worksheet (Figure 8)
- Example of corresponding answers for “Record-Keeping Data & Fighting Atherosclerosis” worksheet (Figure 9)
- Assessment rubric (Figure 10)
- Chalk and chalkboard

PROCEDURE

Before class begins, the instructor should:

1. Make activity cards from the captions provided in Figure 5 and Figure 6.
2. Make copies of worksheets for students’ use.
3. Arrange the plastic canister, four bean bags, and six clothes pin, clip-like kitchen magnets for the demonstration activity.

To begin the lesson and complete the teaching idea, the instructor should complete the following nine activities:

1. Open the lesson with an anticipatory set (Figure 2).
2. Inform students that, before the completion of the lesson, they will be expected to demonstrate mastery of each of the three objectives established for this lesson.
3. Ask students to explain the meaning of the word atherosclerosis. Summarize thoughts provided by students and clarify the meaning of the word. Atherosclerosis is a condition that occurs when fatty substances form plaque deposits inside artery walls. Explain that atherosclerosis makes it harder for the
heart to pump blood throughout the body and the increased work load for the heart often leads to heart attacks. Also, explain that plaque deposits may break loose and travel to cause a stroke.

4. Lead a discussion about three main types of childhood unhealthy physical behaviors, i.e., poor food choices, inactive lifestyle, and lack of portion control of foods chosen.

5. Explain to students how these childhood unhealthy behaviors contribute to the formation of plaque in arteries. Help students understand that although the damage of atherosclerosis does not generally surface until middle age, adults often have a harder time switching to healthy eating patterns and beginning a regular exercise routine if they did not begin these habits in childhood.

User-friendly information about atherosclerosis can be accessed on the American Heart Association website.

6. Lead a discussion about six different solutions to prevent unhealthy dietary and exercise habits. List these solutions on the chalkboard. The six solutions to preventing unhealthy habit formation include making better beverage choices, eating more fruits and vegetables, making healthy choices at mealtime, controlling portion sizes, doing activities that require movement, and getting 30 minutes of exercise daily.

7. After discussing solutions that can be used to prevent childhood unhealthy dietary and exercise behaviors from becoming habits, allow students to participate in a hands-on activity using magnets, bean bags, and a plastic canister to demonstrate the flow of blood through arteries.

(a) Read the first scenario which involves a character, named Leah, who has not been making healthy decisions (Figure 3). Take the plastic canister and set it upright on the table. Six students should be handed a clothes pin, clip-like kitchen magnet. Each student with a magnet will be instructed to state one of the six healthy solutions that could be implemented to assist Leah in improving her health. Explain to students that each magnet represents an unhealthy dietary or exercise habit that leads to plaque build-up. Select six more students and instruct each to cite a single example of an unhealthy dietary or exercise behavior from the scenario in which one stated solution could help to correct. The student reporting the unhealthy dietary or exercise behavior will take the magnet from the student who supplied the healthy solution and will place it just inside the top of the canister. Ask students to determine what the canister represents because each magnet attached to it exemplifies habits that lead to plaque formations. Because plaque formations impede blood flow through the arteries, have students consider what the bean bags passing through the canister represent. After confirming that the canister serves as an artery and the bean bags serve as red blood cells, select a student to toss the bean bags into the canister. After the demonstration, ask the student who tossed the bean bags to explain why it was difficult for the “red blood cells” to pass through the artery.

(b) Next, share with students a scenario about a boy, named Landon, who has been making healthy dietary and exercise decisions (Figure 4). The instructor will take the canister and replace any magnets that might have become dislodged during the first demonstration. Six more students will be selected to reiterate each of the six healthy dietary and exercise solutions that prevent atherosclerosis from occurring. A final group of six students, who have not yet actively participated, will be chosen to cite, one by one, a single example of healthy living that Landon exemplified in the second scenario. After reminding students that each magnet represents an unhealthy dietary or exercise behavior, ask each student citing one of Landon’s healthy behaviors to remove a magnet from the canister. The
magnets can be removed from the canister because Landon’s healthy dietary and exercise behaviors would reduce plaque deposits from forming at an accelerated rate during his childhood years. Require each student who removed a magnet to restate the healthy behavior that he/she identified and give it to the student who reiterated a healthy solution that this behavior would reinforce. To complete the second demonstration, a student should be selected to toss the bean bags into the canister, which is now free from obstructions. After the bean bags are tossed, ask the student to explain why it was easy for the “red blood cells” to pass through.

8. Bring the discussion to a close by asking students to review the definition of atherosclerosis, review the three categories of unhealthy dietary and exercise behaviors, and justify how each healthy solution helps to prevent unhealthy dietary and exercise habits from forming.

9. Students should be placed into six groups (approximately four students per group). Afterward, the instructor will distribute to each group a pair of activity cards in which unhealthy dietary and exercise behavior choices are presented (Figure 5).
   (a) Using the pair of unhealthy dietary and exercise behavior cards that were presented to the group, group members will be asked to determine the category of unhealthy behavior that the pair of cards represents. The decision-making process requires students to analyze the assigned pair of activity cards. Group members will come to a consensus concerning the category of unhealthy dietary or exercise behavior that the pair of cards best exemplifies. Once the decisions have been made, groups will present the result of their assignment to the class. In each group, the first student will read one example aloud; the second student will read the second example; the third student will report the category of unhealthy dietary or exercise behavior that the group selected; and the fourth student will justify the unhealthy dietary or exercise behavior that the group selected.
   (b) Each student will be given a “Record-Keeping Data from Presentations” worksheet (Figure 7). After listening to each group’s presentation, students will record the information reported on the record-keeping sheet. After students have completed all reported information, a second handout, “Fighting Atherosclerosis” worksheet (Figure 8), should be aligned side by side with the first worksheet (Figure 7).
   (c) Next, each group of students will be given a set of six cards in which the six healthy solutions that prevent unhealthy dietary and exercise habit formation are exemplified (Figure 6). Students will work with their group members to select an appropriate solution to correct each pair of unhealthy behaviors as well as an alternate solution that could prevent these unhealthy behaviors from becoming habits. The decision-making process requires students to determine whether the group’s pair of unhealthy behavior cards represents a dietary or an exercise concern. Students should then sort the six healthy solution cards into two groups such that dietary solutions and exercise solutions are separated. From the appropriate set of solutions, group members will discuss and evaluate which healthy solution would be the most beneficial to apply. After the solution deemed most beneficial is recorded on the “Fighting Atherosclerosis” worksheet (Figure 8), remaining solutions will be evaluated to determine another healthy alternative that could be
applied to improve the pair of unhealthy behaviors under scrutiny. An example of corresponding answers to the “Record-Keeping Data and Fighting Atherosclerosis” worksheet is provided (Figure 9).

**ASSESSMENT TECHNIQUE**

Three opportunities for active participation are available during this teaching idea. The first opportunity for assessment occurs during the hands-on demonstration when students identify healthy alternatives that either improve unhealthy dietary or exercise behaviors or reinforce healthy dietary and exercise practices. During the presentation activity, students have a second opportunity to be assessed as they verbally present information about unhealthy dietary or exercise behaviors that they have categorized. Students have a final opportunity to be assessed as they use decision-making skills to select healthy alternatives that improve unhealthy dietary and exercise practices.

Points will be assigned for each opportunity for active participation. As instructions are provided for each segment of the teaching idea, students should receive a clear explanation of the scoring criteria for each activity. Such a detailed explanation of the scoring criteria for each activity helps students form clear expectations about what they need to accomplish in order to master the objectives of the lesson.

During the hands-on demonstration, a score of 3 indicates that the healthy solution identified is directly correlated to the unhealthy dietary or exercise behavior that it improves or the healthy practice that it reinforces. Two points indicate that the student selected a healthy solution that is indirectly correlated to the dietary or exercise behavior. This solution will provide some benefit, but will not allow for as much improvement as other options. One point indicates that the student participated in the demonstration, but the healthy solution he/she selected does not correlate to the unhealthy dietary or exercise behavior under scrutiny.

During the verbal presentation activity, a score of 3 indicates that the unhealthy dietary or exercise behavior is communicated in a clear and organized manner. Two points indicate that the information communicated about the unhealthy dietary or exercise behavior is not well organized, yet the message can still be deciphered by the audience. One point indicates that the student participated in the presentation, but the information he/she presented about the unhealthy dietary or exercise behaviors is unclear and unorganized.

During the completion of the application worksheet activity, a score of 3 indicates that the student chose a healthy solution that directly corresponds to the category of unhealthy dietary or exercise behavior to which it is applied. Two points indicate that the healthy solution chosen by the student might provide some benefit, though it only corresponds indirectly to the category of unhealthy dietary or exercise behavior to which it is applied. One point indicates that the student participated in the worksheet activity, but he/she either failed to complete the entire worksheet or he/she completed the worksheet but the healthy decisions chosen do not correspond to the unhealthy dietary or exercise behaviors under consideration.

A total score of greater than or equal to 7 points for all three opportunities for active participation demonstrates that the student has mastered the objectives of this teaching idea. The lesson should be considered successful if 75% of the participants receive a total score that equals or exceeds 7 points. An assessment rubric (Figure 10) for this teaching idea may be used to evaluate level of mastery for each student.
REFERENCES


Figure 1. Correlation of Objectives to National Standards

<table>
<thead>
<tr>
<th>National Health Education Standards:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Standard 1, grade performance indicators 6 and 8</td>
</tr>
<tr>
<td>• Standard 4, grade performance indicators 1 and 3</td>
</tr>
<tr>
<td>• Standard 5, grade performance indicators 2 and 6</td>
</tr>
</tbody>
</table>

Figure 2. Anticipatory Set for Reducing Atherosclerosis Lesson

Have you ever gotten out of the shower and noticed that it seems to be taking forever for the water to drain out of the bathtub? What is your first thought? Is it, “Oh, no! The pipes are clogged?” When the water has trouble draining, that is a sign that clogging of the pipes has not been prevented and some form of intervention will be necessary to reverse the situation.

This scenario of dealing with clogged pipes in the bathtub is similar to the situation of dealing with clogged arteries in the body. Either precautions need to be taken to prevent arteries from becoming blocked at an accelerated rate or, left unchecked, interventions will have to be made later to keep the body functioning. Healthy childhood dietary and exercise practices help to keep arteries strong, with plaque deposit formations at a minimal level. Establishing healthy dietary and exercise habits during childhood and adolescent years reduces the need to prematurely “unclog your pipes” through surgery later in life.
Landon is an active fellow. Before he leaves home in the mornings, he has a bowl of unsweetened cereal with some fruit and milk. At recess, he burns off some excess energy by participating in a game of kickball. By the time lunch rolls around, he pulls out his packed lunch. Inside he finds two sandwich halves, an apple, some yogurt, and a bottle of water. He returns to class feeling refreshed and ready to concentrate again. After school, his mom takes him to soccer practice. Though he may never be an all-star, he enjoys exercising and socializing with his friends. When he gets home, he eats a serving of baked chicken, steamed vegetables, boiled potatoes, and a whole wheat roll. After working on some math problems and studying for a spelling test, he completes his evening chore of taking the dog for a brief walk. Then he grabs a bottle of water and enjoys a 30 minute TV program before taking a shower and going to bed.

Leah likes to stay inside and chit chat on the phone with her friends when she gets home from school. She has no chores assigned to her, and she typically gets all her homework completed at school. Leah looks forward to grabbing a big bag of cookies and a tumbler full of her favorite soft drink while she watches several of her favorite TV programs. When she’s polished off the family sized bag of cookies and her huge soft drink, she grabs her favorite video game to play. She enjoys competition, though the greatest amount of exercise she gets is using her thumbs to press buttons on the game controller. For dinner, she cooks herself a pizza. She then refills her tumbler with sweet tea, grabs the entire pizza and heads upstairs to listen to music. Feeling quite stuffed, she goes to the computer to look at pictures her friends have posted on various sites. After that, she gets bored so she goes downstairs, grabs a candy bar and munches on it. The sweet taste leaves her craving something salty, so she munches a bowl of chips. Then, she is thirsty, so she drinks another soft drink. She now feels too tired to climb the stairs, so she throws herself on the couch and falls asleep while watching TV.
**Figure 5. Captions for Unhealthy Behavior Activity Card Pairs**

<table>
<thead>
<tr>
<th>Unhealthy Behavior</th>
<th>Activity Card Pair</th>
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</thead>
<tbody>
<tr>
<td>Choosing fried fast food</td>
<td>Choosing candy bars and chips</td>
</tr>
<tr>
<td>Choosing cake and cookies</td>
<td>Drinking soft drinks frequently</td>
</tr>
<tr>
<td>Eating super size portions</td>
<td>Eating to overcome boredom</td>
</tr>
<tr>
<td>Eating from family size bag</td>
<td>Eating while watching TV</td>
</tr>
<tr>
<td>Watching long periods of TV</td>
<td>Talking on a phone frequently</td>
</tr>
<tr>
<td>Playing video games frequently</td>
<td>Resting and listening to music</td>
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### Figure 6. Healthy Solution Activity Card Captions

<table>
<thead>
<tr>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making better beverage choices</td>
</tr>
<tr>
<td>Eating more fruits and vegetables</td>
</tr>
<tr>
<td>Choosing healthy foods at mealtime</td>
</tr>
<tr>
<td>Controlling portion sizes</td>
</tr>
<tr>
<td>Doing Activities that require movement</td>
</tr>
<tr>
<td>Getting 30 minutes of exercise daily</td>
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Figure 7. Record-Keeping Data from Presentations

<table>
<thead>
<tr>
<th>Unhealthy Dietary or Exercise Behaviors</th>
<th>Corresponding Category of Unhealthy Dietary or Exercise Behavior</th>
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<tr>
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</table>
Figure 8. Fighting Atherosclerosis Worksheet

<table>
<thead>
<tr>
<th>Solution to Prevent Unhealthy Dietary or Exercise Habit</th>
<th>Another Healthy Solution That Could Have Been Applied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>
Figure 9. Record-Keeping Data & Fighting Atherosclerosis Worksheet
Example of Corresponding Answers

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>3 Proficient (Responses show a direct correlation)</th>
<th>2 Not Fully Proficient (Responses show an indirect correlation)</th>
<th>1 Not Proficient (Responses show no correlation, but indicate that student participated)</th>
<th>Totals Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHES #1 Comprehend Concepts (Participation in Demonstration)</td>
<td>* Healthy dietary or exercise behavior identified is directly correlated to practices that need to be continued</td>
<td>* Healthy dietary or exercise behavior identified is directly correlated to practices that need to be continued</td>
<td>* Healthy dietary or exercise behavior identified has no correlation to practices that need to be continued</td>
<td>Total Points Earned for Teaching Idea</td>
</tr>
<tr>
<td>NHES #4 Interpersonal Communication (Class Presentation)</td>
<td>* Information related to categorization of unhealthy dietary or exercise behavior is clearly presented</td>
<td>* Information related to categorization of unhealthy dietary or exercise behavior is not clearly presented, but can be deciphered</td>
<td>* Information related to categorization of unhealthy dietary or exercise behavior is not clearly presented</td>
<td>Points Earned for NHES #4</td>
</tr>
<tr>
<td>NHES #5 Decision-Making (Completion of Worksheet)</td>
<td>* Complete written responses are provided for each healthy solution box on the application worksheet</td>
<td>* Incomplete written responses are provided for the healthy solution boxes on the application worksheet</td>
<td>* Healthy solutions provided on the worksheet do not correspond to the unhealthy dietary or exercise behaviors that need improvement</td>
<td>Points Earned for NHES #5</td>
</tr>
</tbody>
</table>
Using Student Response Systems Technology to Correct Teens’ Misperceptions about the Prevalence of Risky Sexual Activities Among Their Peers

P. Cougar Hall, PhD; and Joshua H. West, PhD, MPH

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Submitted October 28, 2010

Abstract

Teaching ideas aimed at correcting teens’ misperceptions related to the prevalence of risky behaviors is an effective health education approach.

Objectives: This teaching idea will allow students to compare their perceptions of teen sexual activity rates, trends, and attitudes with valid research reports of sexual activity rates, trends, and attitudes; access valid research reports in determining actual teen sexual activity rates, trends, and attitudes; and hypothesize how correcting misperceptions of normative teen sexual activity may impact teens’ attitudes, beliefs, and behaviors.

Target Audience: This activity is designed for students in grades 9-12.
INTRODUCTION

Reports indicate that adolescents largely overestimate the risky behavior of their peers, including alcohol use and sexual behavior.\textsuperscript{1,2} Such misperceptions may stem from family, peer, cultural, and media related factors, and they can be powerful determinants of risky adolescent behavior. Narrowing students' misperception gap through normative education approaches, or teaching strategies designed to correct exaggerated perceptions of risky peer behavior, have shown promise.\textsuperscript{3,4} The \textit{14 Characteristics of Effective Health Education Curricula} identified by the Centers for Disease Control and Prevention, Division of Adolescent and School Health (CDC-DASH) promote teaching ideas designed to address, “individual values and group norms that support health-enhancing behaviors,”\textsuperscript{5} which have been found to “positively influence student health practices and behaviors.”\textsuperscript{6} CDC-DASH note effective health education “instructional strategies and learning experiences help students accurately assess the level of risk-taking behavior among their peers, correct misperceptions of peer and social norms, and reinforce health-enhancing attitudes and beliefs.”\textsuperscript{6} National, state, and local data set reports, which reveal adolescent health behaviors, provide a helpful tool for health educators in correcting student misperceptions.\textsuperscript{6,7,8,9} In particular, health educators can use longitudinal data sets to reveal adolescent behavioral trends, including risky sexual activities, over time.

Increased access to technology in many classrooms provides health educators greater opportunities to expose and correct misperceptions regarding adolescent sexual risk behavior while promoting and reinforcing health-enhancing behaviors. Student response systems (SRS) or “clickers” (e.g., iclicker®, irespons®) are one such technology helpful in quickly collecting and revealing student’s perceptions. SRS are handheld devices that students use to respond to teacher prompts (e.g., questions). SRS communicate directly with a receiver that interfaces easily with Microsoft PowerPoint® or a similar program. Teachers can initiate data collection intervals using a teacher version response pad, akin to a remote, and can terminate the interval once all students have responded. Once students have responded to the prompt, the teacher immediately can display an aggregate of students’ responses in graph format allowing the class to see the results and thus providing individual students an opportunity to compare their perceptions to those of the class. SRS software captures an image of the teacher’s computer screen to match the students’ responses to each individual question, which can be accessed later if desired.

OBJECTIVES

After engaging in this teaching strategy, students will be able to do the following:

1. Compare and contrast their perception of teen sexual activity rates, trends, and attitudes with actual teen sexual activity rates, trends, and attitudes.
2. Access valid research reports in determining actual teen sexual activity rates, trends, and attitudes.
3. Hypothesize how correcting peer misperceptions of normative teen sexual activity may impact teens’ attitudes, beliefs, and behaviors related to sexual activity.

These objectives correspond with the following National Health Education Standards (NHES) and performance indicators:

- \textit{NHES # 2} – Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.  
  \textit{Performance Indicator 2.12.7} – Analyze how the perceptions of norms influence healthy and unhealthy behaviors.
- \textit{NHES # 3} – Students will demonstrate the ability to access valid information, products, and services to enhance health.  
  \textit{Performance Indicator 3.12.2} – Use resources from home, school, and community that provide valid health information.

MATERIALS AND RESOURCES

For each student, the following are needed:

- Student response pad
- Computer, projector, screen
- PowerPoint presentation with questions related to teen sexual activity rates, trends, and attitudes (Figure 1)
Using Student Response Systems Technology

Hall and West

- “SRS scoring sheet” (Figure 2)
- Paper copies or internet access to the following:
  - 2009 YRBS (http://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf)
  - National Trends in Risk Behaviors Fact Sheets (http://www.cdc.gov/HealthyYouth/yrbs/trends.htm)
- “Misperception Gap Sentence Completion” (Figure 3) activity sheet

TARGET AUDIENCE

This activity is designed for grades 9-12, but it may be adapted for college students.

PROCEDURE

The following steps are required to complete this 60-to 80-minute teaching strategy:

1. Students will be provided an individual SRS and, if unfamiliar with this technology, they will be provided some practice with it.

2. Students are shown a PowerPoint presentation consisting of questions regarding adolescent sexual activity. Each slide will contain one question with either five possible answers listed as options A, B, C, D, and E, or two possible answers (True/False) listed as options A or B. School, community, and cultural factors should guide the construction of the specific questions asked to students. As a general example, Figure 1 contains 12 questions designed to measure students’ perceptions of national sexual activity rates, trends, and attitudes for a for a 10th grade class. Rates, trends, and attitudes are each measured by four questions.

3. The teacher carefully reads each question and initiates the polling period giving students time to individually select their answer using the SRS. Then students should mark their individual answer on their scoring sheet. No class discussion should occur among students while answering each question. The teacher should encourage students to do their best while noting that answers will not impact their grade and that the specific content of each question is not the focal point of the learning activity.

4. After all students have answered, the teacher will display the results showing the number and percentage of students selecting each answer. Individual student answers cannot be identified by the class of students.

5. Students will record the collection of all students’ answers using the “SRS Scoring Sheet” before moving on to the next question.

6. The teacher should avoid commenting on student results in a way that will indicate the accuracy of student responses.

7. After students have answered all questions, the teacher should introduce each of the available research reports and discuss with students the benefit of utilizing such reports in accessing valid health information. A brief discussion regarding the method (i.e., sample size and data collection) employed by researchers producing the report is appropriate as students may question the validity of data. If computer access is available for individual students, students can access each of the reports online. Hard copies of each report also can be provided for students to use in class. Students can work together in groups to minimize the number of copies that are required.

8. Students are given time to use each research report to find and record the correct answer for the 12 questions presented in the far right column of their “SRS Scoring Sheet.” If the instructor desires, students can be paired together to complete this portion of the activity.

9. After students have had a chance to search the reports, the teacher and students will discuss each answer. Note: The correct
answers to the questions found in Figure 1 are provided for the reader of this paper; however, these answers are not included in the PowerPoint presentation.

10. The teacher will highlight any misperceptions that the compilation of students held as each question and answer is reviewed.

11. Next, students should work independently on the “Misperception Gap Sentence Completion” activity and submit it to the teacher once completed.

12. Based upon student responses to the “Misperception Gap Sentence Completion” activity, the teacher should prepare to talk with students about the potential impact that a sexual risk behavior misperception could have on decision-making and healthy behaviors specific to sexual activity. The teacher might anonymously share several student responses to this activity that help to highlight the health promoting benefits of narrowing the misperception. A brief discussion of pluralistic ignorance, false uniqueness, and the spiral of silence is an appropriate conclusion to this teaching idea.

**Pluralistic ignorance** occurs when a majority of individuals falsely assume that most of their peers behave or think differently from them, when their attitudes and behaviors are similar. For example, pluralistic ignorance may lead a student to engage in a risky sexual behavior without a condom because the student erroneously believes that peers engage in similar risks.

**False uniqueness** occurs when individuals who are in the minority assume that the difference between themselves and others is greater than is the case. False uniqueness may occur among students choosing to abstain from risky sexual behaviors and who underestimate the number of their peers who are making a similar decision, thus falsely assuming that they are more unique than they are.

**Both pluralistic ignorance and false uniqueness** can lead to a spiral of silence. A spiral of silence occurs when students, for example, become less willing to share an opinion when they believe that they are in the minority and could potentially suffer rejection or social isolation based on their attitudes and behaviors.

Special Note: Teachers who do not have access to SRS technology may modify this teaching idea by giving students a paper copy of the questions found in Figure 1 and scoring the results by hand. Then, the results could be shared later with students allowing the remainder of the teaching idea to continue as outlined above.

**ASSESSMENT TECHNIQUE**

This teaching idea was designed to meet three learning objectives related to NHES 2 and 3. The following techniques can be used to assess student learning on each objective:

1. The first objective is aimed at helping students compare and contrast their perception of teen sexual activity with actual rates, trends, and attitudes of teen sexual activity. Achieving this learning objective is facilitated by the use of the SRS and can be assessed using the “SRS Scoring Sheet” where students will indicate if they have overestimated, underestimated, or accurately estimated actual rates, trends, and attitudes.

2. The second objective was designed to help students access valid research reports in determining actual sexual activity rates, trends, and attitudes. This objective is measured formatively through teacher observation as students reference national, state, and local data sets during the learning activity. The teacher can complete a summative assessment of this objective by requiring students to check the “Actual Value” column of the “SRS Scoring Sheet” for accuracy during the class discussion described in procedure # 9. The teacher may choose to award points for using the valid research reports to correctly identify each actual value.

3. The third learning objective focused on challenging students to consider how correcting misperceptions of normative teen
sexual activity may impact teens’ attitudes, beliefs, and behaviors. This objective can be measured by requiring students to submit the “Misperception Gap Sentence Completion” (Figure 3) activity where they state their personal hypothesis regarding the impact of narrowing the misperception gap. Provided the objective nature of students’ personal hypotheses, this assignment is graded pass/fail based upon completion of the assignment.
References


Figure 1: Questions for a 10th grade health education class with answers provided.

A. Approximately what percentage of 10th grade students nationwide has ever had sexual intercourse?
   A. 20%
   B. 30%
   C. 40%
   D. 50%
   E. 60%

Correct answer: C. According to 2009 Youth Risk Behavior Survey (YRBS) data, 40.9% of 10th grade students has ever had sexual intercourse.

B. Approximately what percentage of 10th grade high school students is currently sexually active (have had sexual intercourse in the past three months)?
   A. 20%
   B. 30%
   C. 40%
   D. 50%
   E. 60%

Correct answer: B. According to 2009 YRBS data, 29.1% of 10th grade high school students is currently sexually active.

C. Approximately what percentage of 10th grade high school students has had sexual intercourse with four or more persons?
   A. 10%
   B. 20%
   C. 30%
   D. 40%
   E. 50%

Correct answer: A. According to 2009 YRBS data, 11.7% of 10th grade high school students has had sexual intercourse with four or more persons.

D. Approximately what percentage of Sexually active 10th grade males used a condom at last sexual intercourse?
   A. 40%
   B. 50%
   C. 60%
   D. 70%
   E. 80%

Correct answer: D. According to 2009 YRBS data, 71.9% of sexually active 10th grade males used a condom at last sexual intercourse.

E. Over the past two decades, the percentage of 10th grade students nationwide who has ever had sexual intercourse has:
   A. increased
   B. not changed
   C. decreased

Correct answer: C. According to 2009 YRBS data, the percentage of 10th grade students nationwide who has ever had sexual intercourse decreased from 48.2% in 1991 to 40.9% in 2009.

F. Over the past two decades, the Percentage of 10th grade males who used a condom during last sexual intercourse has:
   A. increased
   B. not changed
   C. decreased

Correct answer: A. According to 2009 YRBS data, the percentage of 10th grade males who used a condom during last sexual intercourse increased from 56.9% in 1991 to 71.9% in 2009.

G. Over the past two decades the percentage of 10th grade students who are currently sexually active has:
   A. increased
   B. not changed
   C. decreased
Correct answer: C. According to 2009 YRBS data, the percentage of 10th grade students who are currently sexually active decreased from 33.2% in 1991 to 29.1% in 2009.

H. Over the past two decades the teen pregnancy rate has:
   A. increased.
   B. not changed.
   C. decreased.

Correct answer: C. According to the 2010 Guttmacher Institute, the teen pregnancy rate has decreased from 117 per 1,000 females in 1990 to 71.5 per 1,000 females in 2006.

I. Approximately what percentage of teen girls thinks it is all right for 10th graders to have sexual relations if they have strong affection for each other?
   A. Less than 30%
   B. 30%
   C. 50%
   D. 70%
   E. More than 70%

Correct answer: A. According to the National Survey of Family Growth 2006-2008 (NSFG), 28.1% of females age 15-19 strongly agree or agree that it is all right for unmarried 16 year olds to have sexual relations if they have strong affection for each other.

J. Approximately what percentage of teens thinks that it is embarrassing to say they are a virgin?
   A. 10%
   B. 25%
   C. 40%
   D. 55%
   E. 70%

Correct answer: B. According to the 2007 With One Voice survey, 75% of teens do not think that it is embarrassing to say they are a virgin.

K. Approximately what percentage of teens who have had sex wish they had waited longer?
   A. 10%
   B. 15%
   C. 30%
   D. 60%
   E. 90%

Correct answer: D. According to the 2007 With One Voice survey, 60% of teens that have had sex wish they had waited longer.

L. Approximately what percent of teens say they share their parent('s)’ values about sex?
   A. 35%
   B. 45%
   C. 55%
   D. 65%
   E. 75%

Correct answer: D. According to the 2007 With One Voice survey, 64% of teens say they share their parent’s values about sex.
**Figure 2: Student Response System Scoring Sheet**

Name__________________________________________ Date__________________________

Directions: First, circle your response to each question in the “My Response” column. Next, record the percentage for each response category from the class in the middle column, and then the actual value. Finally, with the aid of the research reports provided, circle the actual value in the “Actual Value” column.

<table>
<thead>
<tr>
<th>Question</th>
<th>My Response</th>
<th>Class Response</th>
<th>Class Response %</th>
<th>Actual Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Approximately what percentage of 10th grade students nationwide has ever had sexual intercourse?</td>
<td>A. 20%</td>
<td>A. 20%</td>
<td>B. 30%</td>
<td>A. 20%</td>
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<td></td>
<td>B. 30%</td>
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<td>E. 60%</td>
<td>E. 60%</td>
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<td>E. 60%</td>
</tr>
<tr>
<td>Results (Circle the best option):</td>
<td>Did I _______? Overestimate/Underestimate/Estimate Accurate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Did the class _______? Overestimate/Underestimate/Estimate Accurate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2. Approximately what percentage of 10th grade high school students is currently sexually active (have had sexual intercourse in the past three months)? | A. 20%      | A. 20%         | B. 30%           | A. 20%       |
|                                                                          | B. 30%      | B. 30%         |                  | B. 30%       |
|                                                                          | C. 40%      | C. 40%         |                  | C. 40%       |
|                                                                          | D. 50%      | D. 50%         |                  | D. 50%       |
|                                                                          | E. 60%      | E. 60%         |                  | E. 60%       |
| Results (Circle the best option):                                        | Did I _______? Overestimate/Underestimate/Estimate Accurate |
|                                                                          | Did the class _______? Overestimate/Underestimate/Estimate Accurate |

| 3. Approximately what percentage of 10th grade high school students has had sexual intercourse with four or more persons? | A. 10%      | A. 10%         | B. 20%           | A. 10%       |
|                                                                          | B. 20%      | B. 20%         |                  | B. 20%       |
|                                                                          | C. 30%      | C. 30%         |                  | C. 30%       |
|                                                                          | D. 40%      | D. 40%         |                  | D. 40%       |
|                                                                          | E. 50%      | E. 50%         |                  | E. 50%       |
| Results (Circle the best option):                                        | Did I _______? Overestimate/Underestimate/Estimate Accurate |
|                                                                          | Did the class _______? Overestimate/Underestimate/Estimate Accurate |

| 4. Approximately what percentage of sexually active 10th grade males used a condom at last sexual intercourse? | A. 10%      | A. 10%         | B. 20%           | A. 10%       |
|                                                                          | B. 20%      | B. 20%         |                  | B. 20%       |
|                                                                          | C. 30%      | C. 30%         |                  | C. 30%       |
|                                                                          | D. 40%      | D. 40%         |                  | D. 40%       |
|                                                                          | E. 50%      | E. 50%         |                  | E. 50%       |
| Results (Circle the best option):                                        | Did I _______? Overestimate/Underestimate/Estimate Accurate |
|                                                                          | Did the class _______? Overestimate/Underestimate/Estimate Accurate |
5. Over the past two decades the percentage of 10th grade students that has ever had sexual intercourse has...

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<tr>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
</tr>
</thead>
</table>

Results (Circle the best option)  
Did I _________? Overestimate/Underestimate/Estimate Accurate  
Did the class _________? Overestimate/Underestimate/Estimate Accurate

6. Over the past two decades the percentage of 10th grade males who used a condom during last sexual intercourse has...

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<th></th>
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<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
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Results (Circle the best option)  
Did I _________? Overestimate/Underestimate/Estimate Accurate  
Did the class _________? Overestimate/Underestimate/Estimate Accurate

7. Over the past two decades the percentage of 10th grade students who are currently sexually active has...

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<tr>
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<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
</tr>
</thead>
</table>

Results (Circle the best option)  
Did I _________? Overestimate/Underestimate/Estimate Accurate  
Did the class _________? Overestimate/Underestimate/Estimate Accurate

8. Over the past two decades the teen pregnancy rate has...

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<tr>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
<th></th>
<th>A. increased</th>
<th>B. not changed</th>
<th>C. decreased</th>
</tr>
</thead>
</table>

Results (Circle the best option)  
Did I _________? Overestimate/Underestimate/Estimate Accurate  
Did the class _________? Overestimate/Underestimate/Estimate Accurate

9. Approximately what percentage of teen girls think it is all right for 10th graders to have sexual relations if they have strong affection for each other?

<table>
<thead>
<tr>
<th></th>
<th>A. Less than 30%</th>
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<th>C. 50%</th>
<th>D. 70%</th>
<th>E. More than 70%</th>
<th></th>
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<th>B. 30%</th>
<th>C. 50%</th>
<th>D. 70%</th>
<th>E. More than 70%</th>
<th></th>
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<th>C. 50%</th>
<th>D. 70%</th>
<th>E. More than 70%</th>
</tr>
</thead>
</table>

Results (Circle the best option)  
Did I _________? Overestimate/Underestimate/Estimate Accurate  
Did the class _________? Overestimate/Underestimate/Estimate Accurate
10. Approximately what percentage of teens thinks that it is embarrassing to say they are a virgin?

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<tr>
<th></th>
<th>A. 10%</th>
<th>B. 25%</th>
<th>C. 40%</th>
<th>D. 55%</th>
<th>E. 70%</th>
</tr>
</thead>
</table>

**Results (Circle the best option):**

|   | Did I ________? Overestimate/Underestimate/Estimate Accurate | Did the class ________? Overestimate/Underestimate/Estimate Accurate |
|---|---|---|---|---|---|---|---|

11. Approximately what percentage of teens who have had sex wish they had waited longer?

<table>
<thead>
<tr>
<th></th>
<th>A. 10%</th>
<th>B. 15%</th>
<th>C. 30%</th>
<th>D. 60%</th>
<th>E. 90%</th>
</tr>
</thead>
</table>

**Results (Circle the best option):**

|   | Did I ________? Overestimate/Underestimate/Estimate Accurate | Did the class ________? Overestimate/Underestimate/Estimate Accurate |
|---|---|---|---|---|---|---|---|

12. Approximately what percent of teens say they share their parent('s) values about sex?

<table>
<thead>
<tr>
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<th>C. 55%</th>
<th>D. 65%</th>
<th>E. 75%</th>
</tr>
</thead>
</table>

**Results (Circle the best option):**

|   | Did I ________? Overestimate/Underestimate/Estimate Accurate | Did the class ________? Overestimate/Underestimate/Estimate Accurate |
|---|---|---|---|---|---|---|---|
**Figure 3: Misperception Gap Sentence Completion Activity**

Name ________________________________
Date ________________________________

**Misperception Gap Sentence Completion**

Directions: Complete the following sentences below to indicate how you believe narrowing the misperception between perceived and actual norms may impact the sexual activity decision-making of your peers.

1. If teens knew the majority of their peers have not had sexual intercourse, then...
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________

2. If teens knew the percentage of their peers who have sexual intercourse continues to decline, then...
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________

3. If teens knew the percentage of sexually active teens who have had several sexual partners continues to decline, then...
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________

4. If teens knew the percentage of sexually active teens who use condoms continues to increase, then...
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________

5. If teens knew the teen pregnancy rate has dropped dramatically during the past two decades, then...
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________

6. If teens knew that 3 out of 4 of their peers are not embarrassed to be virgin then...........
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________

7. If teens knew the majority of their peers who have had sex wish they had waited longer, then...
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
   ___________________________________________
Crisis Communication: A Class Icebreaker

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Abstract

Objectives: At the end of this learning activity, students will be able to: (1) explain the benefits of remaining calm during an emergency situation, (2) identify communication barriers experienced during an emergency, and (3) discuss factors leading to misinformation when more than one person talks at the same time.

Target Audience: This activity is appropriate for students in grades 6-12 and those enrolled in undergraduate health courses. The total time for this activity is approximately 20 minutes.
INTRODUCTION

Often times, emergency situations are unique opportunities to reveal the effects of miscommunication. How one reacts in emergency situations has a direct impact on the survival of the people involved. Practical skills for helping others in emergency situations are commonly taught in safety and emergency preparedness modules of personal health and wellness courses. One such skill in these modules/courses involves knowing how and what information to communicate with first responders during an emergency. Accurate communication between 911 operators and callers can make the difference in preserving life and limb. To successfully communicate to 911 operators during stressful times, keeping calm is challenging and necessary. All too frequently, due to emotions and outside distractions, these initial communications are fraught with misinformation, resulting in inaccurate assessments and potentially delayed emergency care. In emergency situations, knowing how and what to communicate is typically as essential as properly administering cardiopulmonary resuscitation (CPR) and maintaining an open airway.

The following classroom activity is intended as a short icebreaker and, as such, provides an excellent segue to a lesson on communication skills during crisis situations. By simulating aspects of the emotional involvement generally experienced during an emergency situation, students will gain firsthand involvement related to miscommunication issues that emerge when multiple observers speak at the same time. By demonstrating the importance of reporting details in a clear manner, students can reflect on the implications that concise communication has in real-life situations. Advantages of clear communication include avoiding panic, staying calm, blocking out distractions, and listening to the right person.

OBJECTIVES

At the end of this learning activity, students will be able to:

1. Explain the benefits of remaining calm during an emergency situation.
2. Identify communication barriers experienced during an emergency.
3. Discuss factors leading to misinformation when more than one person speaks at the same time.

MATERIALS AND RESOURCES

Play money (denominations ranging from $1-$10,000)
Two small rubber bats (the flying mammal variety) or something of similar size
Blindfolds (one per team)
Cotton balls (about 25)
Classroom tables or desks

TARGET AUDIENCE

This ice breaker activity is appropriate for students in grades 6-12 and college students who are studying personal safety, emergency preparedness, and/or health and wellness. This activity is ideal for classes of up to 48 students.

PROCEDURE

1. As the class begins, require students to arrange desks/tables into a large 15’ X 15’ square.
2. Ask students to form groups of 3-5 students depending on the class size, and, for interest and group cohesiveness, have each group select a team name.
3. While students are congregating into groups, the instructor randomly will spread the play money, cotton balls, and rubber bats on the floor inside the square configured in step #1. Throughout this ice-breaker teaching idea, the terms inside the square and community pool will be used interchangeably to describe this area.
4. Clarify that all available money is found inside the square and each group will begin with zero dollars. The goal for the designated member of each group is to gather money off the floor while avoiding contact with the rubber bats and cotton balls. Inform students that the play money is in denominations ranging from $1-$10,000 and that crawling on the floor is the easiest way to accumulate money in a timely manner.
5. Explain that to win the coming activity (i.e., game), the group must amass the most money at the end of the designated 5 minute time limit.
6. Require one member from each group to step inside the square. This representative will collect money for his/her group.

7. Explain the rules to the students:
   a. If a student inside the square touches a cotton ball, he/she must remove one random bill, of any denomination, from the money they have collected and throw it back into the community pool inside the square.
   b. If a student inside the square touches one of the rubber bats with any part of his/her body, all money collected for his/her group will be thrown back into the community pool.

8. Initially, group members may not view this activity as a challenge. Group members may begin discussing aloud a plan to quickly locate the larger denomination bills scattered randomly on the floor inside the square. In order to limit the amount of available planning time before the game begins, it is recommended to start immediately after the instructor has finished covering all instructions, including the following additional rules:
   a. Each student inside the square will wear a blindfold.
   b. The remaining group members will arrange themselves in line formation around the perimeter of the square. The primary role for these students in this activity is to provide verbal directions to their blindfolded member inside the square.
   c. The instructor will reside in the middle of the square in order to referee the game. This includes keeping track of time and enforcing the rules specified in step #7.

9. Start the game, with a “ready, set, go!” countdown. The game should run for approximately 5 minutes.
   a. Positive interaction may quickly turn chaotic as students likely will become excited and raise their voices loudly, making it hard for those inside the square to decipher which directions to follow or to whose voice to listen.
   b. Typically, at least one group will end the activity with no money.

10. After 5 minutes have elapsed, stop the activity and ask students, still intact with their group, to assemble to count their collected money. During this time, request volunteers to help rearrange the desks back into the usual classroom configuration. One person from each group will be asked to report his/her team’s total dollar amount; write this total on the chalkboard.

**POST ACTIVITY DISCUSSION**

The teacher should facilitate a debriefing session covering what the students learned and showcasing how events from the activity translate to a real life emergency situation. The instructor should write the following phrases on the chalkboard “What was it like to be inside the square?” and “What was it like to be outside the square?” These questions should spawn an open-ended discussion related to the events that transpired during the game. It is important to explain how this process parallels a real-life emergency situation. For example, participants inside the square represent the 911 dispatcher, who is “blind” to the situation and, therefore, must depend on witnesses at the scene to provide details of the emergency. Those outside the square see everything clearly, but through their own perspective. Also ideal is to ask students, “Does everyone understand what is said when too many others talk?” or “Were you hindered by the stress and emotional duress this activity presented?” Students inside the square typically report experiencing frustration because they were not able to hear over the shouting of other students, not receiving clear directions from their teammates concerning what to touch and where to go, and receiving misinformation from the instructor. These students often discuss difficulty focusing on one person’s voice (Which was the right voice to which to listen?) and describe feeling pressure to do well for their team. Students outside the square may discuss the difficulty of giving clear directions in the midst of chaos. For example, a student may say, “I kept shouting for her to go left, go left, but I meant my left, not her left, so she went the wrong way!” Possible solutions include having only one person per team give directions to their member inside the square and let the student in the square know whose
voice on which to focus; using a numeric coding system to help determine the vicinity of objects inside the square (i.e., 1 = way too close, or getting hot, 2 = turn around, 3 = pick that up). Responses from the open-ended questions listed above will help the students come up with ideas. The instructor also may provide additional information to fill in any remaining gaps.

After the initial discussion, explain how the chaos between those inside and outside the square could be minimized in a real-life situation. For example, if the first responders, those outside the square are panicking and the dispatcher, inside the square, cannot maintain control, overall panic likely will ensue.
REFERENCES


Table: Assessment Worksheet
Please circle the answer below that best indicates your experience with this activity.

1. I feel better prepared to handle emergency situations.
   Agree  Neutral  Disagree

2. I understand the importance of clear communication.
   Agree  Neutral  Disagree

3. I understand the importance of remaining calm in stressful situations.
   Agree  Neutral  Disagree

4. This activity will help me communicate more effectively in a real-life crisis situation.
   Agree  Neutral  Disagree

5. Did you benefit in any way from this activity?
   Yes  No  No opinion

6. Do you think students in future classes would benefit from this activity?
   Yes  No  No opinion
Reader’s Theater: Engaging Students in Classroom Discussion

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Abstract:

Objectives: At the end of this teaching strategy, learners will be able to identify two healthy and two unhealthy lifestyle behaviors portrayed by Jim in the reader’s theater (RT) script; discuss at least one behavior change strategy Jim could use to change an identified unhealthy behavior; analyze their feelings related to making healthy lifestyle choices; and engage in meaningful conversations about health behavior change with their peers.

Target Audience: Middle school and high school students.
INTRODUCTION

Reader’s Theater (RT) is a scripted, formalized storytelling experience that began in the late 1940s as an option to offer greater accessibility to live theater for people. In the 1960s, RT became popular in college theater departments and, eventually, spread to secondary English education. Upon graduation, these secondary English graduates with a teaching certificate brought RT scripts into high school English classes. From there, RT recently has been used to assess reading literacy among students in elementary and middle schools. RT involves the oral presentation of a script by two or more readers about a particular topic. For example, the script in this article, “Death by Chocolate,” (Figure 1, which was written by the authors), deals with healthy lifestyle behavior choices. Many styles of RT exist, but nearly all share the following features:

- Narration serves as the framework of dramatic presentation.
- No sets.
- No full costumes. If used at all, costumes are neutral and uniform.
- No full memorization. Scripts are used openly in performance.

RT provides the opportunity for viewers to look into, and thoughtfully contemplate a story. The goal of RT is to stimulate thinking about the stories so that the cast and audience can engage in meaningful discussion. The RT script is read aloud by students in the cast, i.e., the readers, to the classroom, i.e., the audience. The use of RT requires no acting ability on the part of the students in the cast. The script is merely read by student readers who are instructed not to look at each other during the reading. This oral dramatization weaves and connects the voices, thus creating an affective learning environment. Much like radio drama of old, audience members imagine the scenes taking place as the reader describes them. This process fosters students’ ability to listen and empathize.

Most scripts range from 10 to 20 minutes in length. RT may heighten the connection of learners to the characters as well as families and community situations mentioned in the script. RT also provides an opportunity for reflection and group discussion, which is important for those students who are not likely to volunteer to participate in other classroom activities, such as role playing. Most students view RT as non-threatening. RT has many uses and outcomes. Not only is RT a low cost teaching strategy, it has been found effective in several different academic disciplines to improve language arts. For example, teachers in English, social studies, medical and nursing schools have used RT effectively in the classroom. Performing stories based on another culture is a great way for students to become interested in and familiar with that culture. Further, RT typically fosters a love of reading among students and provides a fun way to teach facts, history, social issues, ethics and/or health.

OBJECTIVES

At the end of this teaching strategy, the learner will be able to:

1. Identify two healthy and two unhealthy lifestyle behaviors.
2. Discuss at least one behavior change strategy Jim could use to change an identified unhealthy behaviors.
3. Analyze their feelings related to making healthy lifestyle choices.
4. Engage in meaningful conversations with their peers about lifestyle behavior change.

MATERIALS AND RESOURCES

A copy of the RT script for each student reader. Although this project involves students in a health class, RT can be used in many subject areas. There are hundreds of RT scripts available for free on the internet. Two such sites are:

http://readerstheatre.blogspot.com/2008/03/brief-history-of-readers-theatre.html

3 ringed binders for each student reader to use during the reading.
A copy of the exercise and evaluation rubric from Table 2 for each student.

TARGET AUDIENCE

RT can be used at any level of education, but this article is focused on using scripts among students in a middle- or high-school health class.
PROCEDURE

The teacher should make a copy of the script (Figure 1) for each character in the story and place this copy in the character’s individual binder. To aid students reading their particular character, the teacher should highlight each character’s speaking lines in his/her individual script. Next, the instructor should obtain student volunteers from the class to immediately read the script in front of the class. Or, the teacher may choose to give the scripts to student volunteers 1-2 days ahead of the reading date so they have time to review their parts prior to the class. The authors have successfully used both techniques. Also, if planning ahead, it is possible to ask student readers to wear the same colors on the day of the reading to allow them to blend together during the presentation. For the health script in this teaching strategy, 5 chairs (5 student readers/characters) and 1 high stool (1 student narrator) will be needed. The instructor should place chairs for each character in a semi-circle in front of the classroom. The high stool should be placed in the middle of the semi-circle.

After the scripts have been highlighted and presented to the readers and chairs/stool arranged, student volunteers read the scripts uninterrupted to the audience of students. After the script has been read, discussion questions are introduced (See Table 1 for questions and a key to facilitate discussion). Discussion questions are a part of most scripts. These questions may be used by the teacher or she/he may pose his/her own questions to generate students’ thinking about issues and messages embedded in the script. From experience, it was noted that most students are eager to discuss some issue from the script and the conversation flows without prompting. A typical RT activity will last between 40 to 60 minutes, including reading and discussion time. This RT script can be used as part of a teaching module on behavior change. Before using the script in the classroom, the class should learn about healthy versus unhealthy lifestyle choices, health risks and behavior change methods, all of which are typically found in the students’ health text. Then, the RT script can be read to encourage students to internalize their learning material and consider personal behavior changes.

ASSESSMENT TECHNIQUES

To assess students’ application of behavior change knowledge, the exercise and evaluation rubric in Table 2 should be used. Students may be given time to work on their scripts in a future class(es) or this requirement may be an out-of-class assignment. The authors recommend 2 additional class periods for students to complete this assignment. Students should be given a copy of the grading rubric when given the original assignment to write a script.
References


Table 1: “Death by Chocolate” Discussion Questions and Key

<table>
<thead>
<tr>
<th>Discussion Question</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are Jim’s unhealthy lifestyle behaviors?</td>
<td><strong>Unhealthy lifestyle choices include:</strong></td>
</tr>
<tr>
<td>What are Jim’s healthy lifestyle choices?</td>
<td>High calorie, high fat diet</td>
</tr>
<tr>
<td></td>
<td>Sedentary lifestyle</td>
</tr>
<tr>
<td></td>
<td>High Stress levels</td>
</tr>
<tr>
<td></td>
<td>Smoking cigarettes</td>
</tr>
<tr>
<td></td>
<td>Working long hours</td>
</tr>
<tr>
<td></td>
<td>Lack of sleep</td>
</tr>
<tr>
<td></td>
<td><strong>Healthy Lifestyle Choices:</strong></td>
</tr>
<tr>
<td></td>
<td>Talks to mother</td>
</tr>
<tr>
<td></td>
<td>Talks with friends</td>
</tr>
<tr>
<td></td>
<td>Talks with health education teacher</td>
</tr>
<tr>
<td></td>
<td>Willing to participate in health risk assessment screening</td>
</tr>
<tr>
<td></td>
<td>Has recommended weight for height</td>
</tr>
</tbody>
</table>

What do you think of Jim’s behavior after his visit with the health educator? If you had been Jim, what would you have done?

Jim appears to be in denial. He was told he needed to change many behaviors. Thinking about changing several behaviors at once may be overwhelming. Jim’s response is to deny he has any problems and orders high-fat, high-calorie foods. Jim should seriously think about changing his lifestyle behaviors. He could start by making small changes like modifying his diet for lunch – maybe order fruit instead of French fries with his burger.

What role does the dream play in Jim’s health behaviors?

The conscious interpretation Jim made about his dream was that someone wanted to kill him. He focused his energies on trying to figure out who might want to kill him. Actually, the dream is Jim’s subconscious telling him he needs to make lifestyle behavior changes to improve his health.

How do individuals make their lifestyle choices? How do they change lifestyle behaviors?

Most people make a conscious decision to be healthy so they can enjoy life and achieve high level wellness. Healthy decisions have to be made every day and, over time, become habit which helps the individual continue to make healthy choices. Experts recommend making a behavior change plan with short and long term objectives. Also, it helps to have a buddy going through the same process with you.

What decision do you think Jim will make and why?

**In favor of change:** Jim will decide to change his health behaviors because he realizes what his dream means and he knows his father died at a young age. Jim will not want to follow in his father’s footsteps.

**Against change:** Jim is too young to connect his current behavior with consequences in some far off future. He will continue to do what his peers do to keep their approval.
### Table 2: Exercise Directions and Assessment Rubric for Student Reader’s Theater Scripts

**Exercise Directions:** Divide students into groups of 5. Ask members in each group to decide on an unhealthy behavior they would like an imaginary friend to change. Then, have them write their own reader’s theater script about a discussion they might have with their friend trying to persuade that friend to change his/her unhealthy behavior.

**Assessment Rubric:**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>3 Points</th>
<th>2 Points</th>
<th>0 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student participates in group discussion (If done as an in-class assignment, base his/her grade on teacher observation. If this assignment is completed out of class, base the grade on the group report of each member’s contributions to the script).</td>
<td>Responses show clear thinking and provide new information.</td>
<td>Responses add to what others have contributed.</td>
<td>Minimal input.</td>
</tr>
<tr>
<td>RT script provides a compelling, health enhancing message for behavior change.</td>
<td>Creative health message included in script.</td>
<td>Health message hard to understand.</td>
<td>No health message provided.</td>
</tr>
<tr>
<td>In the RT script, the reason for the needed behavior change for script character(s) is clearly presented</td>
<td>Reason for change identified in script.</td>
<td>Reason for change implied but not discussed.</td>
<td>No reasons for change discussed.</td>
</tr>
<tr>
<td>Content of RT script provides alternate behavior change methods that can be used.</td>
<td>At least 3 ways characters could change their behavior are discussed.</td>
<td>Two alternatives for behavior change.</td>
<td>One or no way(s) to change behavior.</td>
</tr>
<tr>
<td>RT script provides appropriate methods for character(s) to achieve behavior change.</td>
<td>Behavior change methods are appropriate to the character’s situation and age.</td>
<td>Behavior change methods are generic and may not work for script character.</td>
<td>Behavior change methods suggested are not appropriate for accomplishing desired change.</td>
</tr>
<tr>
<td>Spelling, grammar and punctuation are correct.</td>
<td>No errors found.</td>
<td>A few errors found.</td>
<td>Many errors found.</td>
</tr>
</tbody>
</table>
Figure 1: Reader’s Theater Script “Death by Chocolate”

Setting: Modern, big city suburbia in the home of Jim and Janet Jones. Jim is 16 years old. He is a sophomore in high school. He used to play sports, but after being cut from the basketball team his freshman year, he eats a high calorie, high fat diet and rarely exercises.

Cast:
Narrator
Jim Jones
Jim’s Mom
Mr. Atlas: health educator
Alex – good friend
Waitress

Narrator (excited): Jim Jones awakes from a very scary nightmare.

Jim (very agitated): Mom! Mom!! Wake UP! Someone is going to murder me. I just had a terrible dream and I got murdered.

Mom (out of breath from hurrying to her son’s room): I’m sure it was just a dream. Are you all right now?

Jim: I’m okay but I’m still a little nervous. I think I’ll go have a cigarette to help calm me down.

Mom (with disgust): How can you want a cigarette in the middle of the night? You shouldn’t be smoking anyway. It’s bad for your health. Just go back to sleep!

Narrator: Jim gets out of bed and goes into the living room to have a cigarette. He decides to have a snack too – some potato chips, dip and a coke since he’s already up. After finishing his snack and smoking another cigarette, Jim feels calm enough to go back to bed. The next morning:

Mom: Jim, it’s time to get up. It’s already 7:30 AM and you will be late for school if you don’t get moving. I’ve made a good healthy breakfast for you – oatmeal and fruit.

Jim: Alright, I’m coming. Don’t get so excited – I can like get myself to school. I just never seem to like get enough sleep and it doesn’t help having a nightmare wake me up in the middle of the night. What if someone like really is trying to murder me? Would anyone be that stupid? You’re kidding me about the oatmeal, right?

Narrator: Jim’s mom tries to comfort Jim and heads out for work. Jim downs a coke and dashes off to school.

Alex: Hey, Jim. You feel okay? You look nasty.
Jim: Well, you don’t look that great to me either. I didn’t get much sleep last night. I had a crazy dream like someone was trying to kill me.

Alex: Really? Who offed you? What’d they use?

Jim: I don’t really remember the details at this point. I’m not really like nervous about it, but what if someone really is trying to kill me?

Alex: Don’t be stupid; dreams aren’t something to worry about. They don’t come true – look at us, we aren’t rich and famous with lots of sexy women hanging around us! I wouldn’t worry about dying young if I was you.

Narrator: Despite Alex’s advice, Jim keeps thinking about his dream. He just can’t shake the thought that someone may be planning to murder him. He takes a nap after school until his Mom comes home from work and then he goes out with his friends. They hang out, eat pretzels and drink sodas, smoke cigarettes and listen to music. When Jim returns home, he goes to bed still wondering about why someone would want to kill him. The next day at school, Jim is scheduled to complete a health risk assessment assignment for his health class.

Mr. Woods: Good morning? I hope you all had a good night’s sleep and a nutritious breakfast before coming to school.

Narrator: General snickering all around the classroom.

Mr. Woods: This morning, each of you will be completing a health risk assessment. As we’ve already discussed in class, HRAs are used to gather, analyze, and compare an individual’s characteristics prognostic of health with those of a standard age group, thereby predicting the likelihood that a person may prematurely experience a health problem associated with higher than average death and disease rates. Completing the assessment will help you identify areas of concern about your health habits. Such things as the following are asked: “Do you eat a nutritious diet or a high fat diet?” “Do you get enough exercise each day?” “Are there health risks that you have as a result of your family health history?” “Do you wear a seatbelt?”

Narrator: While Mr. Woods is talking, Jim is thinking about his father. His father was only 50 when he died of a heart attack on Christmas Eve. Jim was only 12 years old. Jim’s father had been a high powered executive who smoked, didn’t exercise, and drank too much. Jim really misses his father.

Mr. Woods: After you have completed the assessment, you will pick one area where you can improve your health. Perhaps you drink too much pop or eat a lot of junk food.

Narrator: In one section of the health assessment, sleep habits were questioned. This reminds Jim of his dream. Jim raises his hand.
Jim: Mr. Woods, do you believe in dreams?
Mr. Woods: What do you mean?

Jim: Well, I had this dream that I was going to be murdered. It was so real, man, that I think it might have been like trying to tell me something. You know, like telling the future or something.

Mr. Woods: (smiling) I don’t think your dream is anything to worry about. Had you watched TV with violence or a murder plot that night?

Jim: Of course I did! Like I always watch CSI on Mondays.

Mr. Woods: OK, let’s get back to the health risk assessment for now. If you want to talk further, Jim, see me after class. To start analyzing our assessments, let’s look at nutrition. Would anyone like to share what they’ve eaten in the last 24 hours?

Narrator: Jim, feeling better about his dream, volunteers to share his recent dietary intake.

Jim (thinking): Let’s see…I had a coke for breakfast. I snagged a couple of Slim Jims for lunch. I went out to the local diner with my mom for dinner. I ordered some chicken fried steak, potatoes and gravy and some greens. As I was going home, we stopped at the local carry out and got some of my favorite ice cream. It’s called “Death by Chocolate.” It’s awesome: what a way to go (smiling)! When I got home, I watched the basketball game. I ate a huge bowl of ice cream before I went to bed. Oh, and on my way home from school, I picked up a bag of cheese doodles and a Mountain Dew® which I had before heading out to dinner.

Mr. Woods: It seems you don’t eat a lot of fruits and vegetables in your diet. You should have 3-4 servings of fruit and 5 servings of vegetables every day.

Jim (slightly annoyed): Hey, like I had mashed potatoes and greens – they’re vegetables.

Narrator: Jim completes his health risk assessment. He is surprised by the results. He needs to improve his diet, quit smoking and start exercising more. According to the assessment, he has multiple risk factors for heart disease.

Mr. Woods: For our next class, I would like for each of you to pick one health habit to improve. In class, we will discuss how to write a contract for change. Then, it will be up to each of you to try to change that behavior.

Narrator: On his way home from school, Jim stops at Taco Olay® to get a chicken burrito. Jim is glad to see his favorite waitress is serving him today.

Waitress: The usual, Jim?
Jim: Yeah, why not. In my health class today I learned I have a terrible diet and I need to eat better. But, what the heck – I’m young and healthy. Did I tell you about my dream?

Waitress: What dream?

Jim: I had this dream that someone was going to murder me. Do you like think dreams can tell the future?

Waitress: I don’t know. Maybe. I’ve had that dream where you feel like you’re falling but you wake up before you hit the ground? You know what they say about that dream? If you hit the ground, you will die. Was your dream like that?

Jim: No. It wasn’t like that. I better order. I’m in a hurry to get home and watch the basketball game on TV.

Narrator: Jim finishes his large coke, and super sized burrito. Three days later…

Mom: You’re not eating your dinner tonight. Is something wrong? I spent a lot of time fixing those stuffed pork chops, scalloped corn and homemade rolls.

Jim: Mom, stop ragging on me and get off my back. I haven’t felt right since I had that dream. Like, I keep looking around thinking someone might be following me. And, now I’ve had to deal with Mr. Woods at school making me feel guilty about my diet.

Mom: Really? What does he want you to change?

Jim: Like forget about it. It’s no big deal, just another hassle.

Mom: You’ve got to get over that dream. Now eat your supper and you will feel better.

Narrator: That night Jim curls up on the couch to watch a basketball game. He is eating a large bowl of “Death by Chocolate” ice cream. Later that night, Jim starts to experience chest pain. He calls out to his Mom.

Jim (loudly): Hey, Mom. Are you awake? I’m not feeling so good.

Mom (sleepily): Just a minute. What’s the matter? Can it wait until morning?

Jim: Yeah, maybe. I just have this like funny feeling in my chest. I don’t know what’s going on. Just like forget it and go back to bed.

Mom: (now worried): I think we should go to the emergency room to get you checked out.

Narrator: Jim, thinking about his father, decides that his mom could be right.
Jim: Okay, okay, like I’ll go. Just stop nagging me!

Narrator: His mom drives Jim to the emergency room. During the trip to the hospital, he starts to sweat. Before the medical staff can get him hooked up to the equipment, Jim says, “I’m having trouble breathing,” and passes out. Jim stops breathing and his heart stops. The medical staff is not able to save him despite all their efforts. Even though he is dead, Jim can see his mom crying.

Just then, Jim wakes up on the couch. He had fallen asleep while watching the game. Jim says to himself…

Jim: What a dream! I died of a heart attack, just like my father! Maybe I am slowly “murdering” myself by my crummy health habits. I guess I like need to make a decision. Either I try to live a healthy lifestyle or I forget about it and stop worrying about it. Hmm…..
Health and Media Literacy in the Wake of H1N1

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Submitted June 11, 2010

Abstract

Objectives: Objectives for this teaching technique are as follows: students will (a) apply media literacy skills to evaluate a health-related news article; (b) differentiate between health literacy and media literacy; and (c) describe the influence of media literacy on health.

Target Audience: This teaching technique is intended for high school/college students enrolled in personal health and/or disease prevention/control courses.
INTRODUCTION

Health educators, particularly those employed in educational settings, may use the recent H1N1 pandemic as a teachable moment experience for students. For example, two key concepts—health literacy and media literacy—especially are relevant to the pandemic and can be introduced or reinforced to students already familiar with those concepts. According to the American Association for Health Education, health literacy is “the capacity of an individual to obtain, interpret, and understand basic health information and services, and the competence to use such information and services in ways that are health enhancing.”\(^\text{1}\) Poor health literacy is a leading contributor to health disparities, rising health care costs, and inadequate disease management.\(^\text{2}\)

Health literacy increasingly is becoming important as more and more Americans consult media sources for health information. Although the media serve to inform the public about health issues like H1N1, selected information may be inaccurate, biased, and/or distorted. Incumbent upon health educators is the need to inform consumers of media about these potential misrepresentations.

One of the National Health Education Standards is that, “Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.”\(^\text{3}\) This standard is achieved, in part, through students’ introduction and development of media literacy. According to Aufderheide, media literacy is the ability “to access, analyze, evaluate, and produce both print and electronic media.” As articulated by the Kaiser Family Foundation, “A media literate person can think critically about what they see, hear, and read in books, newspapers, magazines, television, radio, movies, music, advertising, video games, the Internet, and new emerging technology.”\(^\text{4}\)

Media literacy frequently influences health-related knowledge, attitudes, and behaviors. In the case of H1N1, media literacy has been essential to behavioral awareness and disease prevention. The recent H1N1 pandemic has sparked media frenzy and challenged Americans to evaluate health information and preventive measures for their health (e.g., vaccine utilization, personal hygiene practices, and so forth). The purpose of this teaching technique is to introduce students to fundamentals of health literacy and media literacy through examination of H1N1 and related health topics.

OBJECTIVES

At the end of this teaching technique, students will be able to:

- apply media literacy skills to evaluate a health-related news article.
- differentiate between health literacy and media literacy.
- describe the influence of media literacy on health.

MATERIALS AND RESOURCES

- Computer with video projection
- Chalkboard/whiteboard
- Handouts with H1N1 discussion questions from Table 3
- Handouts with grading criteria for the written reflection

TARGET AUDIENCE

This teaching technique is intended for high school/college students enrolled in personal health and/or disease prevention/control courses.

PROCEDURE

Prior to the class period, instruct students to bring a health-related news article from a media source to class (note: These articles will be used in the Assessment Technique on p. 5). Approximately 90 minutes should be allotted for completing this teaching technique. To begin, poll students to determine how many of them have heard of the concept, health literacy. Solicit one or more volunteers who have heard of health literacy to attempt defining the concept. Follow students’ comments with the formal definition of health literacy provided in the Introduction. Present the following film clip to reinforce the definition of health literacy:

http://www.youtube.com/watch?v=39A9oU-gO0A

Instruct students to select a partner and identify characteristics of a health literate person. Solicit volunteers to share their responses with the class and incorporate additional examples from Table 1 as needed. Record all responses on the chalkboard/whiteboard.

As a transition for discussing media literacy, reiterate to students the importance of understanding and interpreting health information from media sources.
Inform students that media literacy constitutes accessing and critically evaluating health messages communicated through media sources including television, radio, newspapers, magazines, the Internet, and other related outlets. Pose the following discussion question to students: “What factors should be considered when evaluating the efficacy of health information presented through the media?” Record students’ responses and refer to Table 2 for the Center for Media Literacy’s key words/questions for deconstructing messages presented through the media.

Ask students to verbally brainstorm examples of recent health-related topics that have captured attention of the media. Next introduce students to the topic of H1N1 by presenting the following video parody: http://www.youtube.com/watch?v=tbt_PuVAVTU. Distribute a handout with the discussion questions regarding H1N1 and the media in Table 3. Divide students into small groups and instruct each group to identify a spokesperson for sharing responses with the class. Allot approximately 15 minutes for the small groups to answer the discussion questions.

Subsequently, facilitate a class discussion. Refer to http://www.flu.gov and http://www.cdc.gov/h1n1flu/ for information about H1N1. Conclude the class period by soliciting volunteers to share with their peers the health-related news articles from selected media sources (e.g., newspapers, magazines, and so on) they brought to class.

**ASSESSMENT TECHNIQUE**

At the end of the class period (i.e., before students share their articles with students in the class), instruct students to assign a letter grade (i.e., A, B, C, D, or F) to their article and write a brief, yet meaningful rationale for the assigned grade using criteria discussed in class (see Table 2).

As a culminating assessment, distribute to students the grading criteria for a written reflection presented in Table 4. Subsequently, instruct them to (a) describe the connection between health literacy and media literacy, and (b) describe the influence of media literacy on health in a written reflection. Encourage students to incorporate health-related examples into their reflection.
References


Table 1

Selected Characteristics of a Health Literate Person²

Differentiates between reliable and unreliable health information

Accesses health information from reliable sources

Possesses proficient reading skills

Understands basic math operations (e.g., for nutrition labels, prescription labels, and so on)

Understands basic health information and concepts

Exhibits effective communication skills (i.e., listening and speaking)

Processes health information in ways that are health enhancing (i.e., health information gives rise to healthy behaviors and decisions)

Effectively navigates the health care system (e.g., health care providers, health insurance companies, medical forms, prescriptions, and so forth)

Evaluates the influence of cultural factors on health
Table 2

**Key Words/Questions for Deconstructing Media Messages**

<table>
<thead>
<tr>
<th>Authorship: Who created this message?</th>
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<tbody>
<tr>
<td>Format: What creative techniques are used to attract my attention?</td>
</tr>
<tr>
<td>Audience: How might different people understand this message differently?</td>
</tr>
<tr>
<td>Content: What values, lifestyles, and points of view are represented in, or omitted from, this message?</td>
</tr>
<tr>
<td>Purpose: Why is this message being sent?</td>
</tr>
</tbody>
</table>
Table 3

H1N1 Discussion Questions

- What have you heard about H1N1?

- What do you know about H1N1?

- Did the media “overdo it” with regard to coverage of H1N1? Explain.

- Who seeks to benefit from media messages regarding H1N1?

- How has H1N1 been portrayed by the media?

- To what extent has media coverage of H1N1 contributed to increased awareness and/or confusion among the public?

- To what extent has media coverage of H1N1 influenced preventive behaviors among the public?
Table 4

*Grading Criteria for Written Reflection*

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<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Does not meet expectations</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The student articulated an understanding of health literacy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student articulated an understanding of media literacy.</td>
<td></td>
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</tr>
<tr>
<td>The student differentiated between health literacy and media literacy.</td>
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<tr>
<td>The student described the influence of media literacy on health.</td>
<td></td>
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<tr>
<td>The student incorporated at least 1 health-related example to support his/her reflection points.</td>
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</table>

**Total:** \[ \frac{\_\_\_\_}{10} \]
Abstract

Local advocacy has been presented by numerous individuals as a strategy for improving comprehensive school health education. One overlooked group for advocacy instruction is college students.

Objectives: At the end of this lesson, college students will be able to identify the characteristics of a quality school health education program and summarize the impact of the program; identify strategies, using those available, to advocate for school health education; and demonstrate effective advocacy for school health education.

Target Audience: College students enrolled in personal health classes.

KEY WORDS: advocacy, personal health courses, and school health education
INTRODUCTION

Local advocacy has been presented by numerous individuals as a strategy for improving comprehensive school health education. Defriese, Crossland, MacPhail-Wilcox and Sowers believe that health educators must “sell” health education to communities. Wiley, in describing approaches to promote school health education, posits that “health champions” must be developed in local school districts.

Various advocacy strategies have been proposed for preparing school health education majors for comprehensive school health education. Birch and Wycoff-Horn have presented specific instructional techniques for preparing undergraduate school health education majors for local advocacy efforts. Hodges and Videto described the use of service learning as a strategy for developing advocacy skills in students enrolled in a master’s level program in school health. Other individuals, beyond school health educators, have been identified as potential local advocates for school health education. These individuals include community members, elementary and secondary school students (future community members), parents, physicians, and school board members.

One overlooked group for advocacy instruction is college students enrolled in personal health courses. Although no data exist relative to student enrollment in personal health courses, it can be safely speculated that thousands of students across the United States are enrolled in these courses each academic year. All of them soon will be members of local communities (with local school districts), and some will become parents. All members of a community can benefit from effective comprehensive school health education, not just parents of current school-age children.

The purpose of this article is to present advocacy instructional activities developed for implementation in one 50-minute session of a college personal health course. In addition, a culminating activity and optional enrichment activities are presented for completion outside of class. Because many of the instructors of these courses address the individual’s role in promoting community health, devoting minimal time to the development of advocacy skills for school health education is logical course content. Addressing advocacy provides an opportunity to address National Health Education Standard # 8, “Students will demonstrate the ability to advocate for personal, family and community health.” Although these standards were developed for students at the Pre K – 12 grade levels, instruction at the college/university level can provide reinforcement to previous instruction or cover content not previously addressed in high school health education.

TARGET AUDIENCE

College students enrolled in personal health classes.

OBJECTIVES

By the end of this lesson, students will be able to:
- identify characteristics of a quality school health education program.
- summarize the potential impact of quality school health education.
- identify a variety of strategies for advocating on behalf of school health education.
- access and utilize available advocacy strategies.
- demonstrate the ability to effectively advocate for school health education.

MATERIALS AND RESOURCES

- Characteristics of a quality school health education program (Figure 1)
- Importance of School Health or Potential Impact of Comprehensive School Health Education (Figure 2)
- Roles and Responsibilities of School Health Education Decision Makers (Figure 3)
- Strategies for Advocacy (Figure 4)
- Advocacy scenarios (Figure 5)
- Practical Guidelines for Successful School Health Education Advocacy Efforts (Figure 6)
- Assessment Rubric (Figure 7)
- Internet access

PROCEDURES

Introduction

Begin the lesson by providing students with the following information:
This course is an example of health education in the college/university setting. Health education takes place in a variety of venues including the community setting (examples include a fall prevention education program for older adults at a local community center, a heart-healthy cooking program at a local health agency), the medical care setting (examples include an education program in a hospital addressing appropriate physical activity for individuals with cardiovascular disease, a nutrition education program for new parents), the worksite setting (examples include a stress management program for administrators in a corporate office, an injury prevention program for employees of a construction company) and school setting (examples include health education taught by an elementary classroom teacher, or a health education course offered at the middle or high school level).

Throughout most of your life, you are a consumer of health education. For example, you or your family may be involved in programs as participants in community health education programs. You may have a financial interest in private programs through participant fees, or through taxes allocated toward public programs. Lastly, you may have the opportunity to influence decisions related to community programs through voting or public advocacy.

The purpose of today’s lesson is to examine ways that you can advocate for quality health education in schools in your community. Your interest in advocacy for school health education may be based on your overall concern about the well being of children in your community, or it may be meaningful if, as a parent, you have children in schools who could benefit from a quality school health education program.

After providing the preceding information, indicate to the students that they are going to examine their memories of their own K-12 school health education.

School Health Education Memories
Ask students to take approximately one minute to think about their memories of school health education at three levels: elementary, middle and high school. After students have had a chance to consider their personal memories, ask them to assign a grade (A-F) regarding health education at each of the three levels. Provide students with the opportunity to share their grades and specific memories with a partner or in a group of three. After several minutes of small group discussion, review the memories together with the entire class. Acknowledge both positive and negative examples that were experienced by the students. Culminate the discussion by indicating to students that together they will examine characteristics of a quality school health education program and the potential impact of such a program (Figures 1 & 2).

Characteristics/Potential Impact of Quality School Health Education
Using a brainstorming activity with the entire class, have students identify what they think are characteristics of a good school health education program. List these characteristics in view of students. Follow up the brainstorming by providing students with a list of “Essential Characteristics of a Quality School Health Education Program” (See Figure 1). Next, provide students with the following related questions for brainstorming, “Why do you think school health education is important? What is the potential impact of quality school health education on a community?” Again, list all responses and follow up the brainstorming activity with a discussion of the list in Figure 2.

Advocacy Guidelines/Techniques
Health advocacy can be a preplanned sequence of events or a situational circumstance in which a person discovers an opportunity to bring about social or organizational change to promote or enhance health. The best opportunities for advocating for school health are with key decision makers in the school and/or school district. Ask students to identify individuals within schools and communities who typically make decisions regarding school health education. Following this brief discussion, the information in Figure 3 may be used to summarize the roles and responsibilities of key decision makers.

Advocacy Strategies
Effective advocacy messages, depending on particular situation, are directed to appropriate decision makers. A variety of strategies exist to advocate for school health education. The issue and the audience that are the focus of your advocacy efforts, your interests, and comfort levels will be factors in your selection of the best strategy to utilize when developing and delivering an advocacy message. Use the list of web-linked strategies for
advocacy in Figure 4 to help students analyze the benefits of various platforms when advocating for school health issues. Depending on the classroom access to the Internet, these strategies can be examined through a whole-class activity or through individual student exploration.

**Advocacy Scenarios**

Present the school health issues in Figure 5 and allow students an opportunity to select one of the scenarios presented or allow for the creation of their own scenario for which they will create an advocacy plan to address the concerns presented in the scenario. This culminating experience is an out-of-class activity that can be completed individually, in pairs, or triads. The advocacy plans should:

- accurately identify the ineffective health education practices presented in the scenario,
- advocate for effective policies and practices that will better align the program presented in the scenario with the characteristics of a quality school health education program,
- include the potential impact of comprehensive school health education,
- identify the target audience,
- identify multiple advocacy strategies that might be appropriate, given the audience, health issue, and available resources,
- indicate the most appropriate advocacy strategy to deliver the advocacy message and provide justification for the selection of this strategy, and
- demonstrate effective advocacy skills through the creation of an advocacy message addressing a school health issue presented in the selected scenario.

Students may use the information presented in Figure 1, The Characteristics of a Quality School Health Education Program; Figure 2, The Importance of School Health or Potential Impact of Comprehensive School Health Education; and Figure 6, The Practical Guidelines for Successful School Health Education Advocacy when developing their advocacy plans. Work can begin in class and continue out-of-class, with an optional sharing at the beginning of a future class, if time in the schedule allows.

**ASSESSMENT**

If advocacy presentations are possible, consider allowing the student audience to create or use the rubric in Figure 7 to analyze and offer feedback for the advocacy messages presented by each group (for the scenario activity). Instructors are invited to design their own point system. If time does not allow for advocacy presentations, students can submit a written advocacy plan at a later date, which may be graded based on appropriately using the information addressed in class. Lastly, additional ideas of extension activities, are provided in Figure 8 for consideration of instruction beyond one class period.
REFERENCES


Figure 1. Characteristics of a quality school health education program

<table>
<thead>
<tr>
<th>Effective School Health Education</th>
<th>Ineffective School Health Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Focuses on improving or maintaining specific health behaviors</td>
<td>● Delivery of instruction guided by textbook chapters and worksheets</td>
</tr>
<tr>
<td>● Addresses social pressures</td>
<td>● Is lecture-based with minimal surface value assessments that lack variety and depth</td>
</tr>
<tr>
<td>● Builds personal and social skills</td>
<td>● Grades are combined with physical education or another content area, awarded a lower weight or value than other subjects, or not listed on official report cards/transcripts</td>
</tr>
<tr>
<td>● Provides learning strategies, teaching methods and materials that are appropriate for the age, developmental levels, and cultural backgrounds of the students</td>
<td>● Is taught by underprepared and unmotivated teachers without appropriate credentials</td>
</tr>
<tr>
<td>● Allows for adequate instructional time specific to health education</td>
<td>● Programs are offered in isolation or duplicate the work of other health programs and services</td>
</tr>
<tr>
<td>● Is a planned and sequenced curriculum from prekindergarten through grade 12, which progressively builds health concepts and skills</td>
<td>● Inconsistently offered prekindergarten – grade 12</td>
</tr>
<tr>
<td>● Programs are coordinated with other school and community health services</td>
<td>● Perceived by the teacher and students as a rainy day activity or punishment</td>
</tr>
<tr>
<td>● Teachers are appropriately credentialed/licensed in health education, passionate about health education, and regularly participate in high quality professional development</td>
<td>● Avoids health issues that create discomfort for the teacher or school administrator</td>
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<tr>
<td></td>
<td>● Focuses strictly on information-based content</td>
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<tr>
<td></td>
<td>● Is taught sporadically or only when special health events occur</td>
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<tr>
<td></td>
<td>● Fails to effectively utilize community resources and parental involvement</td>
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</table>
Figure 2. Importance of School Health or Potential Impact of Comprehensive School Health Education

- Effective comprehensive school health education reduces costs associated with medical treatment for preventable diseases including addiction counseling, alcohol-related motor vehicle injuries, and drug related crimes. 16, p.44

- Recent evidence suggests that promoting and establishing healthy behaviors as children and adolescents is more effective, and often easier, than efforts to change unhealthy behaviors already established in adult populations.17

- Health risk behaviors that contribute to the leading causes of death in the US are often developed during childhood and prevention is the best cure for chronic disease. School health education provides the fundamental basis for instilling behaviors into our young people to prevent or delay the onset of the leading causes of death in our country.17

- Every day, public schools in the United States have the opportunity to reach 49.8 million students with health enhancing messages to promote healthy lifestyles and the necessary health skills to engage in healthy behaviors.18

- Health education programs in schools can contribute directly to a student’s ability to successfully adopt and practice behaviors that protect and promote health and avoid or reduce health risks.11

- Research has shown that school health education can effectively help reduce the prevalence of health risk behaviors among students and have a positive influence on students’ academic performance.19
## Figure 3. Roles and Responsibilities of School Health Education Decision Makers

<table>
<thead>
<tr>
<th>Examples of School Health Education Decision Makers</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary classroom teachers, middle and high school teachers of health education</td>
<td>Teachers develop a sequence of instruction, select the materials and methods to utilize for health education instruction and assessment, and create opportunities for parent and community involvement.</td>
</tr>
<tr>
<td>School administrators (e.g. principal, district curriculum director, superintendent)</td>
<td>School administrators are responsible for assigning duties to teachers and evaluating and reporting teacher performance, establishing school budgets, which is associated with resource allocation to each teacher and content area, identifying instructional priorities, developing school schedules for content offerings and availability, providing and approving professional development opportunities for teachers, and enforcing state and local policies.</td>
</tr>
<tr>
<td>Members of the local and state school boards of education</td>
<td>State Boards of Education often establish state standards for policies related to the instruction of health education, and determine the qualifications necessary to teach health education. Local Boards of Education are responsible for developing instructional policies, hiring teachers, and in some districts, approving curriculum and materials used by teachers.</td>
</tr>
</tbody>
</table>
Figure 4. Strategies for Advocacy

Participating in Public Forums & Community Meetings – These include Parent Teacher Organization meetings, local school board meetings, public hearings, and education forums are examples of opportunities for local citizens to deliver advocacy messages to decision makers. The following website offers an explanation of how school board meetings operate and gives directions for how to participate. There are also links for video clips of archived school board meetings to watch one in action.

Letters to the Editor – This forum is used by many to express a point of view or concern about a public issue. The key when using this method to advocate for school health education is to be engaging and persuasive yet remain brief using approximately 150 words or less. Use facts to support an issue and cite sources so the editor can fact check if necessary. The link provided is an example of a letter to the editor from an advocate for the National School Program advocating for additional funding when the federal government reauthorizes the 2009 Child Nutrition Act:

Position Papers – These essays are used to express an organization’s opinion about an issue and are usually published in academic journals or by political action groups. These opinions are often supported with valid and reliable research findings from other professionals in the field. The link provided is an example of a position paper related to bullying behaviors and preventing bullying http://www.adolescenthealth.org/PositionPaper_Bullying_and_Peer_Victimization.pdf

Position papers can be useful when citing support for an advocacy message.

Social Networking (blogs, wikis, MySpace/Facebook/YouTube, list servs, electronic discussion boards)

The sites below are examples of how social networking and information sharing tools can be used to share prevention messages and advocate for health promotion.

Students against Destructive Decisions:

MySpace - http://www.myspace.com/saddnational
Facebook - http://www.facebook.com/saddnational
Twitter - http://www.twitter.com/SADDnational

YouTube - CCROPP Initiative provides an example of a community that supports healthier lifestyles. Videos available through YouTube demonstrate examples of how health advocacy has
improved healthy food access and physical activity opportunities in one community in which the schools were a key stakeholder and critical partner in this effort.

http://www.youtube.com/watch?v=it1X_tHaM9g

Podcast – Audio or video files that are created to share a message over the Internet through downloads or web streaming.

Cardiovascular Health - http://www.cvmd.org/

Public Service Announcements (PSAs) – These not for profit advertisement broadcasts are offered on the radio or television on behalf of public interest. PSAs are intended to relay information, usually related to health or safety issues, to create awareness or action. The following link provides examples of PSAs developed by the National Ad Campaign for the Coalition for Healthy Children to promote physical activity among children

Figure 5. Advocacy Scenarios

Scenario 1
Smith High School has recently decided that health education will be taught as a part of the science curriculum. There are a variety of career-oriented courses school officials want to offer, and in order to make room in the required courses, they must remove a current requirement. The principal and several teachers believe health education could easily be taught in high school science classes when instructors cover anatomy. How will you advocate for the importance of a qualified teacher and a standalone course in health education for all high school students? What strategies will you use and what will be your message to the principal and school staff?

Scenario 2
New policies passed by the local public school board of education for Lee High School removed health education as part of the required course curriculum for all students and provided it as a one-course elective. Students are given the choice to enroll in a health education elective course, during Junior and Senior years. This trend seems to be growing among similar school districts. How will you advocate for the importance of comprehensive school health education, integrated into a required 4-year curriculum?

Scenario 3
The local public school board of education is currently trying to decide if sexuality education should be removed from the public schools. A few parents have voiced their beliefs that sexuality education as well as all other health concepts should be taught at home by students’ parents. As a result of hearing these parents’ concerns, the board is now considering removing ALL health education from the local schools. How will you advocate for the importance of health education in public schools? To whom should your message(s) be directed and what strategies will most effective?

Scenario 4
Kelvin and Tracey were two high school seniors at Pleasantville High School and were planning to graduate in the spring, until they were in an automobile crash that ended Kelvin’s life and left Tracey paralyzed from the waist down. Kelvin and Tracey were coming home from the prom when a car driven by a teenage driver under the influence of alcohol collided with their vehicle. Parents became concerned about the type of prevention education the students were receiving in school, and through investigation, found out that the teachers of health education decided not to
teach alcohol and drug prevention because they thought it had been taught in elementary school. Develop a plan of advocacy to implement a comprehensive health education program at Pleasantville High School.

Scenario 5
The local school board of education has decided not to fund a comprehensive school health program. They plan to reallocate previous health education instruction funding to purchase an Alcohol, Tobacco, and Other Drug prevention curriculum that has been proven ineffective in changing behavior. What is the best method for advocating to the local school board the importance of an effective comprehensive health education curriculum? What should this message include?

Scenario 6
A new magnet school, serving students in grades 9-12, recently opened in an area of a nearby community, which is highly impacted by poverty, gang violence, and crime. The new magnet school offers a state of the art dance and music program. There is also an accelerated math and science wing with cutting edge technology resources available to staff and students. The director of the new school has decided to use the additional state dollars to expand the technology lab and the music equipment instead of employing a health education teacher. None of the teachers at this new school is qualified or interested in teaching health education. You recently spoke with a parent in your neighborhood whose child attends this school and found out that this child will receive no health education while attending this school. How and why should you advocate for the inclusion of health education at this school?

Additional Option
Create your own – what are you passionate about related to school health or what causes frustration or concerns you about school health education?
Embrace Your Passion
Be proactive in getting started by engaging in advocacy efforts for issues about which you feel passionate. What about your school health education experience either positively elevates or negatively diminishes that experience? Are there aspects of that experience that get you “on your soapbox,” either ranting of what could be better or praising positive aspects? If so, these are aspects of school health education that you care about, which gives you a place to start for your advocacy efforts.

Eliminate and Confront Your Fears
Many people do not feel comfortable voicing their opinions or taking a stance on an advocacy issue, due to fear of appearing foolish or not having support from colleagues, peers, friends, and/or family. It is important to realize that it is your right, as a private citizen, to engage in advocacy efforts. The way to minimize your fears is to know the facts for the issue in which you are advocating. “Know why you are advocating for the issue, know how it is going to affect the public, and be able to give key examples that support your advocacy agenda”.

Use Advocacy Tools
Use advocacy tools available in order to decrease barriers to advocating. The Health Education Advocate website (http://healtheducationadvocate.org) provides timely advocacy information related to health education and health promotion. The site provides resources for “taking action,” advocacy alerts on current national legislation involving health education and health promotion, links to state legislation, and fact sheets on priority legislative issues affecting health education. Websites, such as Thomas.gov, enables users to search all legislation that goes before Congress. For school health education advocacy tools, go to the American School Health Association website (http://www.ashaweb.org) to find fact sheets and resolutions on issues affecting the well-being and health of school–aged individuals. For example, the first resolution, found on this site, is entitled “Administrative Support for School Health”. This resolution provides facts, background research, and additional information to utilize when advocating for administrative support of school health education. Any advocate for school health education can download, and use these resolutions for support of a cause. In addition, the American Association for Health Education (AAHE) provides a joint position statement from the American Heart Association, the American Cancer Society, and the American Diabetes Association (http://www.aahperd.org/aahe/pdf_files/statement.pdf) on the need and importance
of school health education. Advocates can use this tool for advocacy efforts at the local, state, and national levels.

**Make Time to Advocate**

Time limitations and constraints pose barriers for advocacy. Many people believe that advocacy is too time-intensive, and therefore, do not engage in such efforts. Ask yourself this, “If not us, then who?” Chaney and colleagues\(^2\) provide several examples of advocacy approaches that have worked, and these successes have helped to improve the health and well-being of all citizens of this country. Therefore, it is crucial for all community members to feel it is their right to advocate for causes dear to them. Exercise that right, and educate yourself on why it is important for you (as a future community member) to play a key role in promoting community and school health education in your local areas.
Assess Needs
When planning an advocacy activity, it is important to know the needs of the group for which you are advocating. In doing so, attempt to identify how much effort is required to produce the desired change(s). Effort may vary, depending on the social environment and issue that is being addressed. Once needs have been assessed, an effective strategic plan can be developed. “By having an idea of the surrounding circumstances, the health educator can be better prepared to plan their advocacy efforts,”2, p.47

Plan a Strategy
Depending on the effort needed to produce change, advocacy activities may include the development of a group or coalition to advocate for larger scale issues, or efforts may entail the work of a single advocate. Either way, to be most effective, it is important to develop a plan of action. The main goal is to keep the issue at the forefront of the public’s attention, particularly targeting the individual and/or group(s) that can most directly affect change. For school health education advocacy, the key decision makers need to hear that school health education is of importance to the public. It is up to the advocate to provide evidence of this importance (use the advocacy tools mentioned previously). There are many activities in which advocates can engage to build a successful advocacy plan. Some of these include: writing letters to the editor, writing letters to policymakers, developing a one-page fact sheet on local data to distribute to decision makers, calling decision makers, meeting with decision makers, putting a “local face” to the cause, providing the media with information and stories regarding the issue at hand, and becoming the resource person for your community when information of the issue is needed.

Follow-up
Successful advocacy requires a commitment that will likely require more than one-shot or once-a-year actions. Advocates have to be committed to the cause, for longer than a day, month, or even a year, as it takes time to see sustainable changes in communities. As a result of that commitment, you should always follow-up with all contacts made. For example, if you have met with a decision maker, send a thank you note for his/her time. Make sure to reiterate any commitments made by the decision maker, and remind key people of the importance of your cause. Successful advocates push their agendas in all they do, but with respect and dignity for opposing sides. “A successful advocate should view a relationship with a key policy maker as a marriage, although you may occasionally disagree, you will work better in tandem than as lone individuals.”2, p.48
**Figure 8. Assessment Rubric for Advocacy Presentations**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Not Addressed</th>
<th>Partially Addressed</th>
<th>Complete</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accurately identified the ineffective health education practices presented in the scenario</td>
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<tr>
<td>Advocated for effective policies and or practices that will better align the program presented in the scenario with the characteristics of a quality school health education</td>
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<tr>
<td>Addressed the potential impact of comprehensive school health education</td>
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<tr>
<td>Identified multiple advocacy strategies that might be appropriate, given the audience, health issue, and available resources</td>
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<td></td>
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<tr>
<td>Indicated the most appropriate advocacy strategy to deliver the advocacy message and provide justification for the selection of this strategy</td>
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Figure 9. Resources & Extension Activities

Below is a list of additional ideas for teachers to implement with students outside of class, which can be used if teachers desire to broaden the scope of the advocacy activity. These can be optional activities for students who have a special interest in school health advocacy.

Instructors could ask students to do any of the following extension activities:

- Attend a local school board meeting.
- Write a letter to the editor of the local paper.
- Interview a school board member, an administrator, a teacher.
- Contact a local non-profit health-related volunteer agency such as the American Heart Association, American Diabetes Association, or an American Cancer Society chapter to find out what actions are being taken in support of school health education in the community.
A Middle School Summer Connection Program Lesson: Water Safety

Vic Sbarbaro, EdD, CHES\textsuperscript{1}; Theresa Enyeart Smith, PhD, CHES\textsuperscript{2}

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Abstract

Objectives: After the completion of the water safety lesson, students will be able to: (1) accurately demonstrate various life jacket techniques and the HELP and Huddle positions; (2) explain and analyze water safety information and experiences by completing an analysis of water emergency scenarios; (3) obtain a score of 80\% or greater on a quiz covering water safety; and (4) complete a reflection paper about their personal water safety goals.

Target Audience: This teaching idea is appropriate for students in middle school health class.
INTRODUCTION

Globally, drowning is the third leading cause of accidental death, with 50% of drownings occurring among individuals under the age of 20.\textsuperscript{1,2} Moreover, the Centers for Disease Control and Prevention (CDC) stated that drowning is the second leading cause of unintentional injury deaths for ages 1-14 in the United States. More specifically, roughly 5,000 children, ages 14 and under, are involved in accidental drownings each year. Many of these drowning deaths take place not only in pools, but also in natural water settings, or waterfronts (e.g., lakes, rivers, or oceans),\textsuperscript{3} which vary in water quality, clarity, currents, and beach conditions.\textsuperscript{4} Twenty percent of drownings occur in lakes, rivers, streams, and storm drains.\textsuperscript{5} Drownings occurring in the home setting are most common within a swimming pool (70%) where 77% of those found dead had been missing for five minutes or less.\textsuperscript{6}

Water safety lessons learned at an early age should protect students, especially those who are around large bodies of water, throughout their lives. The knowledge and skills students gain through this teaching idea can be assessed using the revised framework, National Health Education Standards (NHES): Achieving Excellence (See Assessment Technique), which provides the foundation for curriculum, instruction, and assessment in health education.\textsuperscript{7} The NHES guide is an excellent tool for assessment because the standards were developed using health behavior theories and models and, therefore, allow for an analysis of health promotion and risk reduction behaviors among students.\textsuperscript{7} This teaching idea related to water safety facilitates the use of these standards in planning, implementing, and evaluating health education curriculum, instruction, and assessment for students in a middle school.

OBJECTIVES

The goal of this teaching idea is to develop and/or improve water safety skills among adolescents when they are in and around all types of water. After the completion of the water safety lesson, students will be able to: (1) accurately demonstrate various life jacket techniques and the HELP and Huddle positions; (2) explain and analyze water safety information and experiences by completing an analysis of water emergency scenarios; (3) obtain a score of 80% or greater on a quiz covering water safety; and (4) complete a reflection paper about their personal water safety goals.

MATERIALS AND RESOURCES

1. Teachers will need access to various media sources (e.g., computer, television with a DVD and/or VCR player) and have the basic understanding and technology to use the media. Students can use the search engine, Google, to search key words including water safety, drowning, life jackets, HELP and Huddle, and waterfronts.

2. Each student will need paper, a pencil, and a copy of the Water Safety quiz (Figure 1). The teacher should refer to the answers to the Water Safety quiz (Figure 2) and to the Water Safety Scenarios used as activities in Unit 4 (Figure 3).

3. The teacher will need access to at least four life jackets (preferably Coast Guard approved) of various sizes. The teacher should be able to access life jackets through the local American Red Cross chapter, fire department, or through a nearby aquatic/recreational facility. In addition, four paddle oars or table tennis paddles, four small rubber balls or tennis balls, and four cones or objects around which students will maneuver are needed. These items may be borrowed from the physical education department within the school or from a local recreational facility.

4. American Red Cross videos/DVDs, such as Small Craft Safety and Longfellow’s Whale Tales\textsuperscript{8} (These items may be borrowed from the local American Red Cross chapter at no cost or for a minimal fee) or other videos/DVDs related to water safety and articles about true water safety emergencies stories are needed.

5. Teachers could use the AquaSMART Teacher’s Guide, Water and Boating Safety Grades 6-8 as a resource for topics covered in
the water safety lesson. Please refer to page numbers 16, 20, 24, 25, 28, and 29 for information regarding aquatic and boating safety in and around water. The teacher may order this free guide by calling 1-888-326-2822 or accessing the website: www.dbw.ca.gov/aquasmart.

TARGET AUDIENCE
This teaching idea is appropriate for middle school students in health classes.

PROCEDURE
This lesson consists of five units, which include various aspects of water safety. With time allotted and access to materials, the teacher should choose which of the following water activities to use. This lesson in its entirety may take more than one class period.

Unit 1
The teacher will administer a written pretest to determine students’ current water safety knowledge (Figure 1). Using Figure 2, the teacher can determine the accuracy of the pretest quizzes. After the pretest, the teacher will present an overview of water safety and discuss the importance of injury prevention and safety. The overview can include American Red Cross videos/DVDs, such as Small Craft Safety and Longfellow’s Whale Tales, or other videos/DVDs related to water safety and articles in which true stories about water emergencies are presented. The AquaSMART Teacher’s Guide: Water and Boating Safety Grades 6-8 also could be used as a resource for the overview. Resources also could include shared stories and experiences by students.

Unit 2
For the next unit, the teacher may invite a guest speaker from a waterfront aquatics facility or fire department to discuss and demonstrate the correct use of life jackets/personal flotation devices (PFDs). The teacher also may access information about PFDs and water safety techniques by using the search engine, such as Google, to search life jacket, HELP and Huddle positions, water safety, drowning, and/or waterfronts. The teacher should use the information and pictures accessed to share with students. For example, using Google, the teacher should type, “help and huddle position.” Next, the teacher should click on the link, “Free Lifesaving Team support – Survival Swimming – Help and Huddle….” By using this process, the teacher will be brought to a written and pictorial description of the HELP and Huddle positions.

Unit 3
For the third unit, the teacher will organize a Life Jacket Relay Race outside on a blacktop or grassy area. In addition to being a physical activity exercise, students will be engaged in demonstrating various life jacket techniques (e.g., HELP and Huddle positions) throughout the race. Students should be divided into four teams with each group member standing behind each other in a straight line. The teacher will start the relay race by saying to the students, “Go!” The team members will assist the team member at the front of the line to put on his/her life jacket correctly. The student will sit on the ground while wearing the life jacket and demonstrate the HELP position for five seconds, stand up, pick up a paddle oar or a table tennis paddle, and place a small rubber ball or tennis ball on the paddle. The student will walk quickly for about 15 yards, go around one cone and head back to his/her team. If the ball falls off of the paddle, the student must stop and put the ball back on the paddle before continuing. The race continues until all team members have had an opportunity to participate. After the race, each team will demonstrate the Huddle position with the smallest person inside the huddle. This technique is used to minimize heat loss.

Unit 4
After the Life Jacket Relay Race has been completed, to culminate the previous units and end the water safety lesson, the teacher will place students in small groups of three to five students so that the teacher can administer the Water Safety Scenarios (Figure 3).
These scenarios may be distributed individually to the students or the teacher may read the scenarios to the entire class. Group members will discuss and analyze the scenarios with the teacher’s guidance. After the scenario activity, students will complete a water safety posttest (Figures 1 & 2). The teacher’s aim is for the students to achieve at least 80% on the quiz (If 80% accuracy is not achieved, see Standard 1 under Assessment Technique).

**Unit 5**

At the end of the water safety lesson, students will complete a one- to two-page reflection paper about their personal water safety goals to be submitted to the teacher the following day. The teacher will use the question, “What can you do to stay safe around the water?”, as a prompt for students to use for their reflection paper.

**ASSESSMENT TECHNIQUE**

The following is a partial list of the National Health Education Standards. Listed are examples to use as an assessment for middle school students grades 6 through 9.

*Standard 1: Students will comprehend concepts related to health promotion and disease prevention to enhance health.* Before students listen and participate in the various topics in the water safety lesson, they will complete a quiz about water safety (Figure 1) to determine their knowledge on the topic.

After the lesson has been completed, students will re-take the quiz and obtain a score of 80% accuracy or higher (Figure 1 & 2). If a majority of the students do not score at least 80%, the teacher should review the content of the lesson with the students to ensure comprehension. The teacher may choose to give the quiz again.

*Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.* Using the water safety information provided throughout this lesson, students will analyze Water Safety Scenarios (Figure 3). Each group member will explain accurately how to protect himself or herself while assisting others in and around the water.

*Standard 6: Students will demonstrate the ability to use goal setting skills to enhance health.* At the end of the water safety lesson, students will complete a one- to two-page reflection paper about their personal water safety goals.

*Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce risks.* Using the techniques learned in the five units, students will demonstrate healthy practices and behaviors to improve their personal health as it relates to water safety. Examples may include correctly wearing a lifejacket and demonstrating how to protect themselves while assisting others in the water by practicing various water safety skills (i.e., HELP and Huddle Position).
REFERENCES


FIGURE 1

Water Safety Quiz

Directions: The following 10 statements are either True or False. On the line provided next to each statement, write the letter “T” if the statement is True or “F” if the statement is False.

T / F 1. The Centers for Disease Control and Prevention (CDC) states that drowning is the second leading cause of unintentional injury deaths for all ages.

T / F 2. Life jackets are referred to as personal flotation devices (PFDs).

T / F 3. Even good swimmers should wear a life jacket in any situation where there is a chance of falling or being thrown into a river or lake.

T / F 4. In 90% of all drownings associated with a boating accident, the victim was not wearing a life jacket.

T / F 5. If you fall into moving water, you should float downstream on your back going head first to fend off obstacles and avoid entrapping the feet or legs.

T / F 6. In most states, the law indicates that children under 12 years of age must wear a properly fitted, U.S. Coast Guard-approved life jacket while underway on a boat of 26 feet or less.

T / F 7. In most states, the law indicates that all persons on board a personal watercraft (like a Jet Ski) and all persons being towed behind a boat (as in water skiing) do not have to wear life jackets.

T / F 8. There needs to be at least one life jacket for each person on a boat whether the person can swim or not.

T / F 9. One should not enter the water if he or she cannot determine the depth of the water or observe potential hazards.

T / F 10. It is ok to swim in a canal because it is not against the law.
Directions: Complete questions 11-20 by listing your responses to each question in the spaces provided.

List at least four objects that could be used to help a person in trouble in the water.

11._________________________

12._________________________

13._________________________

14._________________________

List the two positions a person can use to conserve body heat if s/he falls into a lake while wearing a life jacket.

15. _________________________

16.__________________________

Accidents can happen at the pool, lake, river, and ocean. The four ways to rescue a victim safely from a body of water are:

17. _________________________

18.___________________________

19.___________________________

20.___________________________
FIGURE 2
Answers to the Quiz (Information can be found in the AquaSMART Teacher’s Guide)

1. True
2. True
3. True
4. True
5. False If you fall into moving water, you should float downstream on your back going feet first to fend off obstacles and avoid entrapping the feet or legs. If the victim was floating head first, possible head and/or spinal injury could occur.
6. True
7. False In many states, the law indicates that all persons on board a personal watercraft (like a Jet Ski) and all persons being towed behind a boat (as in water skiing) have to wear life jackets.
8. True
9. True
10. False In many states, it is against the law to swim in a canal. Those swimming in a canal are considered to have trespassed and can be arrested or fined.

11 – 14: branch, towel, life jacket, pole, oar, paddle, shirt, belt, board, and so on.

15 – 16: HELP position and Huddle position

17 – 20: Reaching assist with hand or piece of equipment; Throw assist with an object that floats; Find an adult who can row out to the victim; and Go call 9-1-1 to get help.
FIGURE 3

Water Safety Scenarios

Students will get into small groups of three to five students. The teacher will provide written scenarios to each student or read the scenarios to all students. Each group of students will explain and analyze their answers for each of the scenarios. (Note: Listed below each scenario are possible responses for further discussion.)

Scenario 1

Four seventh-grade students decide to ride their bicycles after school to a popular “swimming hole.” When they arrive at the “swimming hole,” a student notices that there is a rope swing. The rope is tied around a large tree branch that stretches over the water. The rope swing appears to be at least 5-7 feet above the water. These students have never experienced being on a rope swing. What are some of the water safety issues that need to be addressed?

Using information gained from Units 1 and 2 possible responses for additional discussion are:

a) Always check the depth of water for hidden hazards, such as rocks, logs, branches, the underwater terrain drop offs.

b) Water depth should be at least 9 feet deep before diving into that area.

c) Certain injuries can result from the person not letting go of the rope swing at the right time; examples include broken bones, head, neck and spinal injuries, internal bleeding injuries

d) A swimmer does not know how to swim well enough to make it back to shore.

e) Learn how to swim.
Scenario 2

You are going to meet with some friends on a Saturday afternoon near a river that runs beneath a bridge. When you arrive at the meeting spot, you notice that some friends are jumping off the bridge into the river. One of your friends was dared to jump off of the bridge, does so, and then surfaces to the top of the water but is having difficulty getting back to the shore. Answer the following questions:

a) What are some of the safety factors that need to be considered before jumping off the bridge?
b) What steps should be taken to safely save someone in this situation?
c) What types of injuries can result from jumping off the bridge into the river?

Using information gained from Units 1 and 2 possible responses for additional discussion are:

a) See responses a-e (Scenario 1).
b) These steps should be taken to safely save someone:

1. Reach out with your hand and keep your body weight low because you can be pulled into the water, or you can reach out with a piece of equipment, such as a pole, a branch, a towel, or an object for the victim to grab onto.

2. If you cannot reach the victim with your hand or a piece of equipment, you can throw out something that will float for the victim to hold onto until help arrives on the scene.

3. If you cannot reach or throw an object to the victim, try to find an adult who can row out to the victim.

4. Call 9-1-1 to get help.

c) Someone who is rescued from the water may need first aid and be treated for hypothermia.
Scenario 3

You have been invited by one of your friends and his/her family to spend an afternoon at a lake. Your friend asks you if you want to go out on the lake in a canoe. You notice that there is only one life jacket in the canoe and it does not fit you because it is too big. How would you respond to your friend?

Using information gained from Units 1, 2, and 3, possible responses for additional discussion are:

a) Wearing properly fitted life jackets is a very important safety practice for water sports, boaters, and rafters; if the life jacket is too big, it will pop off over your head when you fall into the water.

b) Life jackets should always be worn while boating, water skiing, or riding a jet ski.

c) The parent/guardian will be fined if there are not enough life jackets for each person in the boat.

d) It is important to follow the boating rules of the lake so that no one is injured.
Cast Away with Maslow’s Hierarchy of Needs: Using Film to Teach Motivations Impacting Human Behavior

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Abstract

The film, Cast Away, will be used to demonstrate the underlying concepts of Maslow’s Hierarchy of Needs.

Objectives: At the conclusion of this teaching idea, students will be able to describe the five levels present in Maslow’s Hierarchy of Needs and analyze how the main character of Cast Away progressed through these levels.

Target Audience: This lesson is intended for high school and/or undergraduate students participating in general health courses or those specifically aimed at mental health processes.

Key Words: Maslow, Hierarchy of Needs, Film, Motivation
INTRODUCTION

Hunt, a proponent of using film as an instructional tool, contended that a struggle for many instructors is providing students with meaningful, concrete examples to demonstrate conceptual points they are trying to make.1 Because films (i.e., movies) typically engage students, stimulate them emotionally and physiologically, as well as provide a visual medium, scholars contend that film may be useful in helping students make the conceptual link between course work and reality.2 Moreover, films allow course content to become “immediate, relevant, and concrete.”3 The use of film as a teaching tool is present in fields spanning health education,4 abnormal psychology,5 educational leadership,6 sociology,8 counseling,9 and science.10 Therefore, in order to capitalize on the merits of using film as a teaching tool, the movie, Cast Away,11 will be used to demonstrate and explore the intricacies of Maslow’s Hierarchy of Needs.12-14

OBJECTIVES

At the conclusion of this teaching idea, students will be able to:

- describe the five levels present in Maslow’s Hierarchy of Needs;12-14
- analyze how the main character in Cast Away progressed through the levels of needs outlined in Maslow’s Hierarchy of Needs.

MATERIALS

To implement this lesson, the following materials are required:

- A DVD or VHS copy of the film Cast Away, starring Tom Hanks;
- A DVD or VHS player, depending on the type of movie used;
- A compatible television; and
- Copies of Figure 2 for students.

TARGET POPULATION

This lesson is intended for high school students and/or college students at the undergraduate level. The topic is applicable to general health courses as well as those that are focused specifically on mental health processes, such as psychology, social work or counseling.

PROCEDURE

The three teaching steps of this lesson include a short class discussion on Maslow’s Hierarchy of Needs,12-14 a viewing of portions of the film, and the assessment technique. These steps likely will span two 50-minute class sessions.

Step 1: Introduce Students to Maslow’s Hierarchy of Needs

This primer session about Maslow’s Hierarchy of Needs12-14 is intended to last approximately 20 minutes. Key concepts include Maslow’s five overarching needs that motivate human behavior. These needs, in hierarchical order (from most imperative to least imperative regarding survival) include physiological needs, safety needs, love needs, esteem needs, and the need for self-actualization.12,13 Typically, the needs outlined by Maslow are depicted as a pyramid-shaped diagram (See Figure 1).

To understand the relative importance of each level of need in relation to the others, Maslow proposed the following rule of thumb: “The higher the need the less imperative it is for sheer survival, the longer gratification can be postponed…”13(p57) Consequently, physiological needs are considered the “most potent of all needs.”12(p373) In other words, higher needs are not as immediately pressing for a person. A deficiency in higher needs, such as self-actualization and self-esteem, fails to create the urgency and defense reaction generated by a lack of lower level needs, such as food, water or safety. Furthermore, lower level needs are never truly eliminated for anyone. A need can be met (e.g., eating a sandwich to satiate hunger), which in turn causes that need to no longer be the central motivator; however, this need is always present and, therefore, typically continually impacts human behavior.

Step 2: View Cast Away

After concluding the introductory discussion of Maslow’s Hierarchy of Needs and before beginning the film, students should be provided Figure 2, which contains the assessment strategy for the lesson. Providing the assessment questions before viewing
the movie will assist students in note taking, documenting the different types of need portrayed in the film, and drawing connections between the film and Maslow’s Hierarchy of Needs.12-14 (See Figure 2)

The viewing of Cast Away will take approximately 60 minutes, spanning the second-half of the first session/class and the beginning half of the following session/class. To maximize instructional time and limit exposure to unnecessary portions of the film, instructors should start the film at the point in which the main character becomes stranded on the island (DVD = Chapter 9; VHS = 31 minute mark). The film should be stopped at the point where the main character departs the island (DVD = Chapter 23; VHS = 94 minute mark).

ASSESSMENT STRATEGY

After the film has been stopped, the instructor should explain to students that they will be writing an essay about Chuck Noland’s experiences on the island. More specifically, students will examine how Noland addressed his particular levels of needs and progressed through Maslow’s proposed stages. This essay will be completed as a homework assignment. The questions and expectation outlined in Figure 2 (Assessment Strategy) will provide the structure for developing the essay. Students should use their notes from the Cast Away viewing as well as the class discussions to complete this assignment.

After outlining the assessment strategy, the remaining portion of class (roughly 20 minutes) should be used to further reinforce the key concepts of Maslow’s Hierarchy of Needs and how they were manifest in Cast Away. The discussion will assist students in forming their answers to the homework assignment and filling-in their notes from the viewing. The following questions, and accompanying potential answers, can be used to guide such a discussion:

1. According to Maslow, what needs are most urgent? (Physiological)
   a. What needs appeared to be most urgent to Chuck Noland? Did his actions agree with Maslow’s Hierarchy? (Yes; once on the island, he immediately sought food)

2. What were some of the items already present on the island that Chuck used to meet one of his needs? (Coconuts, Rocks, Sticks, Palmetto Leaves).
   a. What need(s) did these items meet? (Physiological, Safety)

3. What were some of the items from the FedEx boxes that Chuck used? (Ice Skates, Clothing, Volley Ball, VHS Tapes).
   a. What need(s) did these items meet? (Physiological, Love)

4. During his stay on the island, what need(s) required the majority of Chuck Noland’s time/energy/effort? (Physiological)

5. In comparison to his first few days on the island, what differences did you notice in Chuck Noland after he resided there for four years? (He became self-sufficient, using natural resources to meet his need (i.e., He was able to fish with a spear, predict weather with homemade calendar, and build fire at will)
REFERENCES


Figure 1 - Maslow’s Hierarchy of Needs

Directions: Write about Chuck Noland’s experiences while he was stranded on the island. More specifically, describe how Chuck met his needs (e.g., physiological, safety, love, esteem, and actualization) and progressed through the stages of need outlined by Maslow. The following questions and expectations are intended to guide you through the writing process by providing key content to include in your essay. Use examples from class discussion and the film *Cast Away* to support your answers. Please make sure to write in complete sentences and use appropriate grammar. Essays should range between 3-5 pages.

<table>
<thead>
<tr>
<th>Question</th>
<th>Expectations</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the five levels present in Maslow’s Hierarchy of Needs</td>
<td>- Describe each level, including at least two examples of each</td>
<td>- 2 pts: Describes each level; includes two examples for each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1 pt: Describes each level; includes fewer than two examples for each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not describe all five levels</td>
</tr>
<tr>
<td>2. Which need(s) does Maslow contend is most urgent/necessary? Why?</td>
<td>- Identify one level of need.</td>
<td>- 2 pts: Identifies correct level; includes supporting rationale</td>
</tr>
<tr>
<td></td>
<td>- Provide one reason why this need is most urgent.</td>
<td>- 1 pt: Identifies correct level; lacks supporting rationale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not identify correct level</td>
</tr>
<tr>
<td>3. Which needs did Chuck Noland first try to address when he arrived on</td>
<td>- Identify two levels of need.</td>
<td>- 2 pts: Correctly identifies two levels; provides one example of each</td>
</tr>
<tr>
<td>the island? How did he accomplish meeting these needs?</td>
<td>- Provide at least one supporting example for each level of need.</td>
<td>- 1 pt: Correctly identifies one level; provides one example</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not identify any correct levels</td>
</tr>
<tr>
<td>4. What items from the FedEx boxes did Chuck Noland use? What need(s)</td>
<td>- Identify three FedEx box items used.</td>
<td>- 2 pts: Correctly identifies three items; describes how each item was used</td>
</tr>
<tr>
<td>did each of these items meet?</td>
<td>- Identify how each item was used to meet at least one level of need.</td>
<td>- 1 pt: Correctly identifies one or two items; describes how each item was used</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not correctly identify any items</td>
</tr>
<tr>
<td>5. How did Chuck meet his Safety need?</td>
<td>- Identify how the environment was used or altered to meet his need for safety.</td>
<td>- 2 pts: Correctly identifies how the environment was either used or altered to meet the safety need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not identify how the environment was used or altered</td>
</tr>
<tr>
<td>6. How did Chuck meet his Love need?</td>
<td>- Identify any relationships he had on the island that met his need for love.</td>
<td>- 2 pts: Correctly identifies an island relationship meeting the love need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not identify an island relationship</td>
</tr>
<tr>
<td>7. In comparison to his first few days on the island, what differences</td>
<td>- Identify three specific, observable differences/changes.</td>
<td>- 2 pts: Identifies three specific changes</td>
</tr>
<tr>
<td>did you notice in Chuck Noland after residing there for four years?</td>
<td></td>
<td>- 1 pt: Identifies one or two specific changes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not identify any specific changes</td>
</tr>
<tr>
<td>8. In your opinion, did Chuck Noland ever meet his need for self-</td>
<td>- Explain why you believe his full potential was either met or not met.</td>
<td>- 2 pts: Provides rationale for opinion; includes at least one supporting example</td>
</tr>
<tr>
<td>actualization during his stay on the island? Why or why not??</td>
<td>- Provide at least one supporting example.</td>
<td>- 1 pt: Provides rationale for opinion; does not include a supporting example</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0 pts: Does not provide a rationale for opinion</td>
</tr>
<tr>
<td>9. Did Chuck progress through Maslow’s Hierarchy of Needs in the order</td>
<td>- Identify the order in which he progressed through Maslow’s stages.</td>
<td>- 2 pts: Correctly identifies progression through stages; includes an example of each level</td>
</tr>
<tr>
<td>proposed by Maslow? In other words, did Chuck address his lower-level</td>
<td>- Provide at least one supportive example for each level, in chronological order.</td>
<td>- 1 pt: Correctly identifies progression through stages; does not include examples</td>
</tr>
<tr>
<td>needs before his higher-level needs?</td>
<td></td>
<td>- 0 pts: Does not correctly identify progression through stages</td>
</tr>
</tbody>
</table>
Eat This, Rather Than That: Teaching Healthy Food Choices to Youth

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Abstract

As indicated in the latest National Health and Nutrition Examination Survey (NHANES) report, youth obesity continues to increase, indicating that the development of engaging methods for teaching proper nutrition to youth is likely more important than ever.

Objectives: Students will locate and interpret nutritional information, identify healthy qualities of foods, and choose healthy food options in various food service settings.

Target Audience: Middle school and high school students.
INTRODUCTION

Obesity is a major health concern in the United States, even to the point of being an epidemic. In the National Health and Nutrition Examination Survey (NHANES), it was reported that the prevalence of obesity among 6-11 year olds and 12-19 year olds has increased to 17 percent and 17.6 percent respectively.\(^1\) Two of the Healthy People 2010 national health objectives are to reduce the prevalence of (1) overweight and obesity among adults to less than 15% and (2) obesity among children and adolescents to less than 5%.\(^2\) Nevertheless, in the Healthy People 2010 Midcourse Review, it was reported that the weight status of adults and youth shows a trend away from these 2010 targets.\(^3\) This trend of overweight and obesity raises public health concerns not only because of its impact on youth during their child and adolescent years, but also because of the impact it carries into adulthood.

The dietary contributions to obesity and deficiencies in youth dietary patterns are well established. The Centers for Disease Control and Prevention (CDC) reported that less than 40 percent of children and adolescents meet the dietary guidelines for saturated fats of keeping consumption to less than ten percent of total calories.\(^4\) Low calcium consumption, high fat consumption, and excessive caloric intake indicate additional nutrition problems for youth. Alarming, the National Cancer Institute reported that three out of four Americans die each year because of serious diseases that are linked to what is eaten.\(^5\) These diseases include:

- Coronary heart disease
- Type 2 diabetes
- Cancers (endometrial, breast, and colon)
- Hypertension (high blood pressure)
- Dyslipidemia (for example, high total cholesterol or high levels of triglycerides)
- Stroke
- Liver and Gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis (a degeneration of cartilage and its underlying bone within a joint)
- Gynecological problems (abnormal menses, infertility)\(^6,7\)

In the Dietary Guidelines for Americans, the foundational information for building a healthy diet is presented.\(^8\) In addition to recommending that Americans eat a variety of nutrient-dense foods, including more fiber-rich fruits, vegetables, and whole grains, a few specific recommendations are made about limiting some foods. Specifically targeted for decrease in consumption in these Guidelines are fat, saturated fat, cholesterol, sugars, and sodium. The specific guidelines are that Americans should:

- consume less than 10 percent of calories from saturated fatty acids and fewer than 300mg/day of cholesterol.
- keep trans fatty acids intake as low as possible.
- keep total fat intake between 20 and 35 percent of calories.
- consume most fats as polyunsaturated or monounsaturated fatty acids.
- reduce sugar and starch containing foods.
- consume fewer than 2,300 mg of sodium per day

One tendency attracting attention in the obesity epidemic is the connection between obesity and the dramatic increase in eating away from home, specifically in fast food restaurants.\(^9,10\) If youth learn to make healthy choices when eating away from home, the development of health literacy in this area is critical, and health teachers carry a responsibility to promote health literacy among all students.\(^11\) Presented in this teaching idea are specific activities that may be used to teach the theme of “food swaps,” which is found in the food/diet book, *Eat This, Not That*.\(^12\) The premise of the book is that a significant difference exists between meal and food items, and that substitutions, or food swaps, can be made that will reduce the calories, fat, saturated fat, sugars, and sodium consumed. Examples are provided from fast food and chain restaurants, traditional holiday meal options, supermarket purchases, and other settings. The activities in this teaching idea are designed to challenge students to research the nutrition information for their favorite and most common
foods and offer healthier alternatives, directly addressing several of the National Health Education Standards, including:

- Standard 1 – Students will comprehend concepts related to health promotion and disease prevention to enhance health;
- Standard 3 – Students will demonstrate the ability to access valid information and products and services to enhance health; and,
- Standard 5 – Students will demonstrate the ability to use decision-making skills to enhance health.

**OBJECTIVES**

These teaching strategies will enable students to:

a. locate and interpret nutritional data and information on a wide variety of food items typically popular among youth;
b. identify healthy quantities of foods; and,
c. choose healthy food options in various food service settings, including the school cafeteria, restaurants and fast food establishments, and recipes.

**MATERIALS AND RESOURCES**

Each student will need:

- access to a classroom copy of *Eat This, Not That*, which can be acquired from the school library, local library, or local book store;
- a list of food choices available through the school cafeteria, including the school meal services selections, snack bar options, and vending machine items;
- internet access to locate the nutritive values of foods from restaurants and fast food establishments;
- poster board and markers; and,
- a copy of the recipe worksheet (Figure 1).

**TARGET AUDIENCE**

This teaching idea is appropriate for students in middle school and high school grade levels.

**PROCEDURES**

Prior to using these teaching activities, students should be instructed on the basics of proper nutrition using the Food Pyramid and the Dietary Guidelines for Americans, with the understanding that the typical American diet is too high in calories, fat, saturated fat, sugar, and sodium. The websites for these teaching resources are located in the reference section of this article. Each of the following activities is estimated to take two to three class sessions for research and preparation with an additional class session allotted for the creation of the poster or recipe worksheet.

**Activity One: Order This, Rather Than That – in the school cafeteria.**

In groups of three or four, require students to compile a list of the foods from the school snack bar, vending machines, and/or cafeteria that they likely would choose for an entire week. Using their lists, instruct students to determine the nutritional value of the food choices offered through the school meal program. A most helpful resource for this activity is Nutritive Value of Foods, which is found online at: [http://www.nal.usda.gov/fnic/foodcomp/Data/HG72/hg72_2002.pdf](http://www.nal.usda.gov/fnic/foodcomp/Data/HG72/hg72_2002.pdf). Students also may be able to obtain some of the nutrition information from school food service personnel.

After students obtain that nutritional information, the instructor should distribute a poster board and markers to each group. Students should create a poster using ideas from the pages in *Eat This, Not That* to show the calorie, fat, saturated fat, sugar, and sodium content of the food or menu items. These items then should be compared and contrasted with menu items that are lower in these nutrients. Posters also should contain the citation of the sources of information gathered by the students. Require the groups to present their posters to the class and
recommend food items, including the reason for their recommendation.

**Activity Two: Order This, Rather Than That – Local restaurants and fast foods.**

In groups of three or four, have students select their favorite restaurants or fast food establishments and compile the nutrition information of their favorite meals offered by that restaurant. An internet search using the name of the restaurant will take students to many websites where the nutritional content of their menu items are provided. Students should access the nutrition information link to find the nutritional value of the menu items. Next, students should contrast an order of one main entrée, one side order, and one beverage that includes high content of calories, fat, saturated fat, sugar, and sodium with another order that is significantly lower in calories, fat, saturated fat, sugar, and sodium. The instructor should distribute a poster board and markers to each group and require students to construct a page similar to the pages in *Eat This, Not That* wherein it is recommended that the more desirable menu items should be chosen over the less desirable items.

**Activity Three: Add This, Rather Than That – to recipes.**

Ask students to bring a recipe from home to class, perhaps one of their favorite dishes, or a recipe for a favorite dish located in a magazine or found through an internet search. Instruct students to determine the ingredients in the recipe. Require students to find what healthy ingredients may be substituted for some of the ingredients listed in the recipe. The following two websites offer some healthy substitution options:

- [www.mayoclinic.com/health/healthy-recipes/NU00585](http://www.mayoclinic.com/health/healthy-recipes/NU00585)

A worksheet with questions about the recipe as well as a substitution suggestion chart is provided in Figure 1.

**ASSESSMENT TECHNIQUE**

Students should present and display their posters for the entire class, explaining the nutritional detriments of the unhealthy menu items and providing a rationale for their alternative choices. The instructor will use a rubric (See Figure 2) for grading the *Eat This, Rather Than That* activities. The rubric will be used to assess each student’s research skills, familiarity with nutritional content, understanding of the purpose and importance of making healthy substitutions in food selections, and application of the materials chosen for comparison. The quality and appearance of the presentation is the final rubric topic.
REFERENCES


## Figure 1: Recipe Worksheet

<table>
<thead>
<tr>
<th>RECIPE WORKSHEET</th>
<th>ANSWERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>What ingredients contribute the largest number of calories to the recipe?</td>
<td></td>
</tr>
<tr>
<td>What ingredients contribute the greatest amount of fat to the recipe?</td>
<td></td>
</tr>
<tr>
<td>What ingredients contribute the greatest amount of saturated fat to the recipe?</td>
<td></td>
</tr>
<tr>
<td>What ingredients contribute the greatest amount of cholesterol to the recipe?</td>
<td></td>
</tr>
<tr>
<td>What ingredients contribute the greatest amount of simple sugars (empty calories) to the recipe?</td>
<td></td>
</tr>
</tbody>
</table>

**INSTEAD OF:**

**TRY:**
Figure 2: Eat This, Rather Than That

Grading Rubric

<table>
<thead>
<tr>
<th>Grading Criteria</th>
<th>Target (points)</th>
<th>Acceptable (points)</th>
<th>Unacceptable (points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrates an understanding of the purpose of the “food swaps” from a nutritional perspective:</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Exhibits an understanding of the importance of healthy substitutions. Correctly identifies components of menu items high in calories, fat, saturated fat, sugar and sodium.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Makes clear comparisons and contrasts of food items:</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Provides justification for specific substitutions and comprehends the calorie, fat, saturated fat, sugar, and sodium “savings” possible by making healthier selections.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Provides valuable and applicable material and information:</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Material has practical application to food choices of the intended audience. Various food selection settings are addressed. Choices presented lead to healthier eating habits.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Uses accurate and well-researched information:</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Carefully checks facts and presents all information with accuracy. Uses reliable sources of information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Presents all information and material in a well-organized, attractive fashion:</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Creative poster that generates interest in content. Captures attention of target audience. Grammar and spelling on poster is correct. Acceptable presentation style.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Story of Bottled Water: Understanding the Environmental Impact of Bottled Water Use

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Abstract

Bottled water use negatively impacts the environment and human health.

Objectives: After this lesson, students will be able to (1) identify similarities and differences between bottled water and tap water, (2) list ways that bottled water is marketed to consumers, (3) explain the environmental impact of bottled water use, and (4) identify ways to reduce the environmental impact of bottled water use.

Primary Audience: Middle school and junior high school students.
Introduction

Water is important for health and daily bodily functions. From regulating body temperature and lubricating joints to flushing out waste and carrying nutrients and oxygen to cells, water is necessary for human survival (Mayo Foundation for Medical Education and Research, 2011). Due to its importance, having access to fresh drinking water is a basic human right and one that is promoted by health organizations and nations around the world. The United Nations Millennium Development Goals include ensuring environmental sustainability and reducing the number of people without sustainable access to safe drinking water by 2015 (World Health Organization [WHO], 2000). In the United States, in Healthy People 2020, four environmental health objectives directly address water access, quality, conservation, and safety (U.S. Department of Health & Human Services [USDHHS], 2010).

Although no one could argue successfully against the benefits of water consumption and the importance of clean water, there are concerns about how water is being consumed—especially in America. Even though 90% of Americans have access to clean, and virtually free, tap water, bottled water consumption has increased dramatically in the United States over the past couple decades to the place where consumers are purchasing over half a billion bottles per week (Leonard, 2010; Soechtig et al., 2009). The production, distribution, and waste management issues associated with this sheer volume of plastic bottles is immense and takes a toll on the environment (Leonard, 2010). In addition, the plastic water bottles are made with a toxic ingredient called bisphenol A (BPA), which has been banned from children’s products in many countries and nine U.S. states due to its negative effects on human reproduction and development (Janssen, 2011; Kim, 2011; National Institutes of Environmental Science, 2007). With increasing bottled water consumption and the health concerns associated with BPA, the simple act of choosing bottled water over tap water is having widespread environmental and health impact around the globe (Leonard, 2010; Soechtig et al., 2009).

The purpose of this lesson is to help students understand the importance of water and how bottled water use impacts the environment, which corresponds with National Health Education Standard I: Students will comprehend concepts related to health promotion and disease prevention to enhance health (The Joint Committee on National Health Education Standards, 2007). Specifically addressed in this lesson is performance indicator 1.8.3: Analyze how the environment affects personal health. The lesson is centered on the web-based animation, “The Story of Bottled Water,” narrated by Annie Leonard (2010). In this video, it is revealed how bottled water consumption impacts the earth and the health of humans. The activities provided in this lesson give students a chance to learn about the issue of bottled water consumption and consider individual and community solutions.

Objectives

After this lesson, students will be able to:

- identify similarities and differences between bottled water and tap water,
- list ways that bottled water is marketed to consumers,
- explain the environmental impact of bottled water use, and
- identify multiple ways that individuals and communities can reduce the environmental impact of bottled water use.

Materials and Resources

- Computer, Internet access, projector, and screen
- Downloadable Materials from the Story of Bottled Water website
  a. Story of Bottled Water video (Leonard, 2010)
  b. Story of Bottled Water Myth Versus Reality handout (Leonard, 2010)
- Lesson introduction (Table 1)
- Lecture notes (Table 2)
- Lesson conclusion (Table 3)
- Worksheet (Table 4)
- Quiz (Table 5)
- Answer keys for worksheet and quiz (Table 6)
**Primary Audience**

This activity is designed for students in middle school and junior high school. The lesson may be used in a health class or social studies class that is concentrated on health, environmental, community, or global issues.

**Procedure**

**Preparation:**

To prepare for the Story of Bottled Water learning activity, the instructor should complete each of the following:

1. Go to the Story of Bottled Water website and access the two Downloadable Materials (a. and b. listed under the Materials and Resources section of this article).
2. Review the entire Procedures section of this article as well as the video and/or lecture materials (Tables 1, 2, and 3).
3. Copy the following documents (1 each per student)
   a. Story of Bottled Water Myth Versus Reality handout (b. Under Materials and Resources)
   b. Worksheet (Table 4)
   c. Quiz (Table 5)

**Class Period Prior to the Story of Bottle Water Lesson:**

Distribute one copy of the Story of Bottled Water Myth Versus Reality handout to each student as an assigned reading, which should be finished before the day that the Story of Bottled Water lesson is scheduled. This reading is designed to increase awareness and interest among students for the upcoming Story of Bottled Water lesson.

**Class Period for the Story of Bottled Water Lesson: Total Time available: 45 minutes (including 8 minute Assessment)**

- **Introduction (Table 1): 2 minutes:** Introduce The Story of Bottled Water activity using the provided introduction content (Table 1). Before beginning the video or lecture, distribute the worksheet (Table 4), which students should complete while watching the video or listening to the lecture. Completion of the worksheet will prepare students for discussion and for the assessment activity (Table 5). To prepare students for the quiz, inform them that they will be assessed on the content of the worksheet at the end of the lesson.

- **Video or Lecture (Table 2): 16 minutes:** For the main part of the lesson, choose one of two options: (1) show the Story of Bottled Water video, which can be viewed in a web browser or downloaded to a computer or (2) provide a lecture on the Story of Bottled Water video content using the provided lecture notes (Table 2).

- **Conclusion (Table 3): 5 minutes:** Address the key points of the video or lecture by using the provided conclusion content (Table 3). The last part of the conclusion content has questions suitable to pose to the class for discussion: “What things can YOU do to reduce your carbon footprint due to bottled water use? What can you do at home, in our school, or in the community?” Allow the students to raise their hands and share their ideas.

- **Small Group Discussion: 7 minutes:** Divide students into groups of 3-4 to compare and discuss the answers on their worksheets (Table 4).

- **Class Discussion & Review: 7 minutes:** Review each worksheet question (Table 4) with students and provide correct responses, which are provided in Table 6. The purpose of the worksheets is to serve as a learning tool to facilitate discussion among students and help them prepare for the lesson assessment/quiz, so the worksheets do not need to be graded.

**Assessment Technique**

A quiz that stems from the Story of Bottled Water worksheet and aligns with the objectives of this learning activity is provided in Table 5. Before this lesson begins, students should be informed that they will be quizzed on the content of the Story of Bottled Water worksheets. Administer the quiz during the last 8 minutes of class. At the conclusion of the class, collect and grade the quiz using the answer key provided (Table 6).
References


Table 1
Lecture Introduction

- Water is important for health (Mayo Foundation for Medical Education and Research, 2011).
  - Moistens tissues (mouth, eyes, nose)
  - Protects body organs and tissues
  - Helps prevent constipation
  - Helps dissolve minerals and other nutrients during digestion
  - Regulates body temperature
  - Lubricates joints
  - Flushes out waste products
  - Carries nutrients and oxygen to cells
- Access to clean and safe drinking water is an important goal for all nations.
  - The United Nations Millennium Development Goals include ensuring environmental sustainability and reducing the number of people without sustainable access to safe drinking water by 2015 (World Health Organization [WHO], 2000).
  - In the United States, in Healthy People 2020, four environmental health objectives directly address water access, quality, conservation, and safety are identified (USDHHS, 2010).
- Bottled water is an environmental health issue.
  - Even though 90% of Americans have access to clean and virtually free tap water, drinking bottled water has increased dramatically in the United States over the past couple decades (Soechtig et al., 2009).
  - A handful of countries, including Canada, China, and the European Union, and nine U.S. states have banned bisphenol A (BPA), the main ingredient of plastic water bottles, from children’s products due to its negative effect on human reproductive and development functions (Janssen, 2011; Kim, 2011; National Institutes of Environmental Science, 2007).
  - With increasing bottled water consumption and the fact that most nations have not banned BPA from plastic water bottle production, the simple act of choosing bottled water over tap water is having widespread environmental and health impacts around the globe (Leonard, 2010; Soechtig et al., 2009).
Table 2
Lecture Notes (Leonard, 2010)

Bottled Water vs. Tap Water

Cleanliness
- In many ways, bottled water is less regulated than tap.
  - Tap water is regulated by the Environmental Protection Agency (EPA) under the Safe Drinking Water Act.
    - Public water operators must provide reports regarding water source, contaminants in the water, and compliance with government regulations.
  - Bottled water is regulated by the Food & Drug Administration (FDA).
    - Bottled water companies are not required to disclose the water source, how it was treated, or contaminants in the water.

Taste
- In taste tests across the country, people consistently choose tap over bottled water.

Cost
- Bottled water costs about 2,000 times more than tap water.
- DISCUSSION: Can you imagine paying 2,000 times the price of anything else? How about a $10,000 sandwich?
- 10-15% of the cost of bottled water goes to the bottled water advertising budget.

Marketing of Bottled Water

History of bottled water sales.
- If companies want to keep growing, they have to keep selling more and more product. In the 1970s, giant soft drink companies got worried as their growth projections started to level off. Companies found their next big idea in a fad...Perrier® designer water.

So how do you get people to buy this product that you can get free through the tap? Through “manufactured demand.”
- Fear/scare tactics: make people feel scared and insecure if they don’t have it.
- Fantasy/seduction: pictures of mountains streams and pristine nature
  - Nature scenes make people think the water comes from pristine natural sources when, in fact, one third of all bottled water in the U.S. actually comes from the tap.
- False/misleading environmental claims
  - In an ad by a large bottle water company, it was written, “bottled water is the most environmentally responsible consumer product in the world.”
  - Make their water sound like something more than just water and better than tap water by boasting about special filtration processes and mineral additives.

Environmental Footprint of the Bottled Water Industry

- People in the U.S. buy more than half a billion bottles of water every week—enough to circle the globe more than five times.
- Each year, making the plastic water bottles used in the U.S. takes the equivalent of 17 million barrels of oil—enough oil and energy to fuel a million cars for one year. Even more energy is used to ship bottled water around the planet.
- Eighty percent of the bottles end up in landfills, where they will sit for thousands of years, or in incinerators, where they are burned, releasing toxic pollution.
The rest of the plastic water bottles get collected for recycling. Shiploads of these leftover plastic bottles are sent to India, where mountains of plastic bottles are found. Instead of being recycled into more bottles, these bottles are down-cycled, which means turning them into lower quality products that will be thrown away later. The parts that couldn’t be down-cycled are simply thrown away. That means the plastic water bottles used in the United States are shipped all the way around the world to be thrown into a dump in India. DISCUSSION: Would you want other countries to ship their waste to America?

Know Your Rights

- Access to clean, safe drinking water is a right.
- In 2002, the United Nations Committee on Economic, Social and Cultural Rights said that water is a human right and that water is necessary for human dignity and the realization of other human rights.
- The bottled water industry sees tap water as an enemy to their business:
  - One bottled water company Vice Chairman publicly said “the biggest enemy is tap water!” Bottle water companies want consumers to think tap water is dirty and bottled water is the best alternative.
  - In many places, public water is polluted due to polluting industries like the plastic bottle industry.

What You Can Do

- Make a personal commitment not to buy or drink bottled water unless the water in your community is unhealthy as determined by your local or state health department.
- Use a mug, glass, or BPA-free reusable bottle when drinking water.
  - There are safe, easy-to-clean, and lightweight reusable drinking water bottles.
- Install an under-the-sink filter to eliminate bacterial and chemical particles.
- Learn more about your water quality by contacting your local water utility.
- If there are local water quality issues in your neighborhood, get your neighbors together to figure out what changes are needed for improvements, including contacting your government representatives about how and why those changes need to happen.
- Join a campaign group of people who are working for real solutions, such as demanding investment in clean tap water for all. In the U.S., tap water is underfunded by $24 billion partly because many people believe drinking water only should come from a bottle. Currently, around the world, a billion people don’t have access to clean water. Yet cities all over the world are spending millions of dollars to deal with all the thrown out plastic bottles. DISCUSSION: What if people all over the world spent that money improving our water systems or, better yet, preventing pollution?
- Lobby your city officials to bring back drinking fountains.
  - In many states, building codes mandate one source of public water for every 1,000 people that a building can accommodate.
- Work to ban the purchase of bottled water by your school, organization, or entire city.

Your Efforts Make a Difference

- In the United States, San Francisco, Minneapolis, Seattle, and Salt Lake City have banned bottled water at city functions to save money and promote their cities’ tap water.
- In Canada, 72 municipalities from 8 provinces and 2 territories have implemented restrictions on bottled water.
- Bottled water sales have begun to drop while business is booming for safe refillable water bottles.
- Restaurants are proudly serving “tap” and people are choosing to pocket the hundreds or thousands of dollars they would otherwise be wasting on bottled water.
Carrying bottled water is on its way to being uncool, because we know better now.
* Consumers are not buying into “manufactured demand” for bottled water as often anymore.
Table 3
Lecture Conclusion (Leonard, 2010)

A. Bottled water does not taste better than tap water. Many times, taste is shaped by advertising rather than what is good for consumers. The bottled water industry is not meeting consumer demand; rather, it is creating consumer demand by using misleading advertising strategies.

B. Tap water is regulated by the strict EPA standards while bottled water is regulated by the FDA, which has no reporting requirements. The best long-term solution for healthy drinking water and the environment is not bottled water; it is making sure that everyone has access to safe tap water.

C. Tap water is more convenient, less costly, and better for the environment than bottled water. Using a reusable bottle and filling it from public sources is convenient, low-cost, and does not add to landfill waste or air pollution.

D. Recyclable does not mean something is "green" or good for the environment. Drinking tap water has a MUCH lower carbon footprint than bottled water. Drinking tap water is one of the best ways to reduce global warming.

E. There are lots of things we can do as individuals and communities to reduce our carbon footprint in relation to bottled water use. DISCUSSION: What things can YOU do to reduce your carbon footprint due to bottled water use? What can you do at home, in your school, or in your community?
Table 4
Story of Bottled Water Worksheet

Please complete the following statements while viewing the short animations (or listening to the lecture).

1. Tap water is regulated by the ____________ under the Safe Drinking Water Act.

2. Bottled water is regulated by the ____________.

3. Who is required to provide reports regarding water source, contaminants in the water, and compliance with government regulations?
   a. Public water operators who oversee tap water sources
   b. Bottled water companies
   c. Both public water operators and bottled water companies

4. Bottled water costs about ______________ times more than tap water.

5. Convincing people to buy products they don’t really need is a marketing strategy called ________________ ________________.

6. List 3 messages that marketers use to get people to buy bottled water.
   a. 
   b. 
   c. 

7. Americans consume half a ______________ bottles of water each week, which is enough to circle the earth ______________ times.

8. Making plastic water bottles used in the U.S. takes the equivalent of ______ million barrels of oil, which is enough oil and energy to fuel ______ million cars for one year.

9. ________ % of water bottles end up in landfills or get incinerated.

10. What can you do to reduce the environmental impact of bottled water use?
    a. Make a personal commitment not to buy or drink ______________ water unless the water in your community is truly unhealthy.
    b. Use a mug, glass, or BPA-free reusable bottle to drink ______________ water.
    c. Work to ban the purchase of ______________ water by your school, organization or entire city.

11. San Francisco, Minneapolis, Seattle, and Salt Lake City have banned ______________ water at city functions to save money and promote their cities’ ______________ water.

12. Bottled water sales have begun to ______________ while business is booming for safe refillable water bottles.
Table 5  
Story of Bottled Water Quiz

Score: ____/50 possible points (5 points per each of 10 questions)

Multiple Choice: Please circle the best answer for each question.

1. True or False? Bottled water companies are required to disclose the source of their water, how the water was treated, and contaminants in the water.
   a. True  
   b. False

2. True or False? In taste tests, people consistently chose bottled over tap water.
   a. True  
   b. False

3. Americans consume _______ bottles of water each week, which is enough to circle the earth _______ times.
   a. Half a million, 24  
   b. Half a billion, 5  
   c. Half a trillion, 12

4. 80% of water bottles:
   a. end up in land fills or get incinerated  
   b. are recycled  
   c. are down-cycled

Matching: Please place the letter (A, B, C) next to the example (5, 6, 7, & 8) that best describes the term (next to A, B, and C).

A. Scare tactics  
B. Seduction  
C. Misleading environmental claims

5. _____ In an ad by a large bottled water company, it is written, “bottled water is the most environmentally responsible consumer product in the world.”
6. _____ Pictures of mountain streams and pristine nature scenes.
7. _____ A local ad in which it is written, “The label says FIJI because it’s not bottled in Cleveland.”
8. _____ A top water executive said, “When we’re done, tapped water will be regulated to showers and washing dishes.”

Short Answer: Please answer the following questions as thoroughly as possible.

9. Describe one way that environmental factors affect human health.

10. List 3 ways that you or your community can reduce the environmental impact of bottled water use.
**Table 6**

*Answer Key for Tables 4 (Worksheet) & 5 (Quiz)*

<table>
<thead>
<tr>
<th>Answer key for worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EPA</td>
</tr>
<tr>
<td>2. FDA</td>
</tr>
<tr>
<td>3. Public water operators who oversee tap water sources</td>
</tr>
<tr>
<td>4. 2,000</td>
</tr>
<tr>
<td>5. manufactured demand</td>
</tr>
<tr>
<td>6. scare, seduce, mislead</td>
</tr>
<tr>
<td>7. billion, 5</td>
</tr>
<tr>
<td>8. 17, 1</td>
</tr>
<tr>
<td>9. 80%</td>
</tr>
<tr>
<td>10. What can you do to reduce the environmental impact of bottled water use?</td>
</tr>
<tr>
<td>a. bottled</td>
</tr>
<tr>
<td>b. tap</td>
</tr>
<tr>
<td>c. bottled</td>
</tr>
<tr>
<td>11. bottled, tap</td>
</tr>
<tr>
<td>12. drop</td>
</tr>
</tbody>
</table>
Answer key for quiz
1. False
2. False
3. B. half a billion, 5
4. A. end up in landfills or get incinerated
5. C. Misleading environmental claims
6. B. Fantasy/Seduction
7. A. Scare tactics
8. A. Scare tactics
9. Possible answers for ways that environmental factors affect human health.
   a. Provides natural resources (e.g., air, water, plants), which are essential to life.
   b. Of all the chemicals used in production today, only 5 percent have been tested for their effects on human health.
   c. In working to keep prices low, many businesses employ strategies such as skimping on health insurance for their workers.
   d. By putting toxins into our products and environment, we are essentially putting them into our bodies.
   e. By releasing pollution into the environment, we are increasing our incidence of asthma and certain types of cancers.
   f. Toxic chemicals build up in the food chain and concentrate in our bodies.
   g. Toxins present in our products but also released into the air, land, and water as pollution through factories production.
   h. In the U.S., each person creates about 4 ½ pounds of garbage a day, leaving less healthy and livable environments in which to live.
   i. By incinerating products we create super-toxins, which are released into the environment, taken into the body, causing us to be sick.
10. Possible answers for ways you or your community can reduce the environmental impact of bottled water use.
   a. Make a personal commitment not to buy or drink bottled water unless the water in your community is unhealthy.
   b. Use a mug, glass, or BPA-free reusable drinking water bottle to drink tap water
   c. Install an under-the-sink filter to eliminate bacterial and chemical particles.
   d. Learn more about your water quality by contacting your local water utility.
   e. If there are local water quality issues, organize your neighbors to get improvements by getting people together, figuring out what changes are needed, and telling your government representatives how and why those changes need to happen.
   f. Join a campaign that’s working for real solutions, such as demanding investment in clean tap water for all.
   g. Lobby your city officials to bring back drinking fountains.
   h. Work to ban the purchase of bottled water by your school, organization or entire city.