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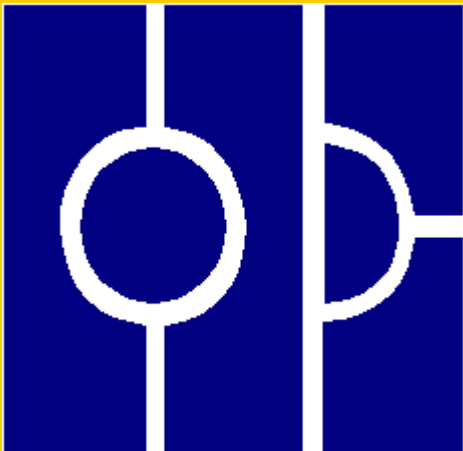
Health Education Teaching Techniques Journal

Teaching Technique Articles

Alcohol Prevention Letters:
Creating a Circle of
Support.....2

Let's Talk about G-E-R-M-S:
Educating Elementary School
Students about Germs and Hand
Sanitation.....9

Making Decisions: Paired-
Comparison Analysis.....20



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Alcohol Prevention Letters: Creating a Circle of Support

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Abstract

Helping young students connect with influential others who can support them not to drink is effective for youth being alcohol-free.

Objectives: At the end of this lesson, students will be able to: 1) communicate personal reasons for choosing to be alcohol-free and 2) identify at least 12 individuals with whom the student does not live who they believe will support them in their decision to be alcohol-free.

Primary Audience: Students in grades 3 through 5.

Introduction

Alcohol is the most widely abused substance among youth in America. In addition to an increased risk of addiction, underage drinking plays a role in risky sexual behavior, physical assaults, motor-vehicle crashes, injuries, suicide, and physical, social and emotional maldevelopments (U.S. Department of Health and Human Services, [USDHHS], 2007).

Most young people are surrounded by encouraging family members and individuals who can be mobilized to support an alcohol-free lifestyle, which is an effective approach to preventing underage drinking (Catanzaro & Laruent, 2004; Groh, Jason, Davis, Olson, & Ferrari, 2007; Spoth, Greenberg, & Turrisi, 2008). Providing opportunities for students to make connections with influential individuals, including parents/guardians, families, and other positive role models, is one of the *Characteristics of Effective Health Education Curricula* identified by the Centers for Disease Control and Prevention, Division of Adolescent and School Health (CDC-DASH) (Joint Committee on National Health Education Standards, 2007).

According to the CDC-DASH, linking students with those who affirm and reinforce health-promoting norms, beliefs, and behaviors is also a component of effective health education curricula (Joint Committee on National Health Education Standards, 2007). Finally, CDC-DASH includes programs that are theory-driven and based upon constructs known to influence behavior as one of their 14 *Characteristics of Effective Health Education Curricula* (Joint Committee on National Health Education Standards, 2007). One such theoretical approach, the Theory of Planned Behavior (Ajzen, 1991), includes a powerful construct, i.e., subjective norm. A subjective norm is a person's perception of social normative pressures, or relevant others' beliefs, that the individual should or should not engage in a particular behavior (Ajzen, 1991; Montano & Kasprzyk, 2008).

Objectives

The objectives of this lesson have been designed to coordinate with National Health Education Standard (NHES) # 4, which is concentrated on students' ability to use interpersonal communication

Health Education Teaching Techniques Journal, 2012, Volume 2.

skills to enhance health and avoid or reduce health risks. More specifically, teachers may use this lesson to help students demonstrate effective verbal and nonverbal communication skills to enhance health (NHES Performance Indicator 4.5.1). At the end of this lesson students will be able to do the following:

- Communicate personal reasons for choosing to be alcohol-free;
- Identify at least 12 individuals with whom the student does not live who will support them in their decision to be alcohol-free.

Materials and Resources

- Multi-use sticky labels and felt-tipped pens
- 4 postal envelopes per student
- 4 postage stamps per student (see Special Note at end of Assessment Technique)

Primary Audience

This activity is designed for students in grades 3 through 5.

Procedure

Prerequisite

Prior to implementing this activity, students should have received age-appropriate instruction related to alcohol, identifying short- and long-term effects of use (see Table 1), and identified family or school rules relating to alcohol. One 20-minute lesson followed by two 30-minute lessons should be allotted for this teaching technique.

Lesson #1: (20 minutes)

1. The teacher will organize students into groups of six. Each group will have six multi-use sticky labels and a felt-tipped pen.
2. The teacher will ask each group to brainstorm a list of individuals who they think could provide support during a difficult time (e.g., a physical illness or injury, being bullied at school, the death of a pet). If groups are having difficulty generating a list of potential support people, the teacher may make some suggestions (e.g., parent/guardian, sibling, friend,

grandparent, teacher, religious leader, neighbor, coach).

3. With a felt-tipped pen, each group member will take one multi-use sticky label and write the name of a potential support person on the label. Groups should avoid duplicates (e.g., listing *grandparent* twice) so that a variety of potential support persons are represented.
4. Next, the teacher will instruct each student to separate the multi-use sticky label from its backing and place it on his/her chest.
5. The teacher will invite one group of students to the center of the classroom to be observed by all other groups. Five members of this group will be arranged in a small circle with 1-2 feet between each student. The other member of the group will stand in the middle of the circle with arms crossed and hands resting on his/her own shoulders. The teacher will explain that this formation represents a *circle of support* for the student in the center. The teacher explains that when the center student begins to lean, there must always be two in the *circle of support* prepared to gently provide help. With eyes opened, the student in the center must keep both feet together and maintain stiffness through the legs and back while trusting that the support circle will provide the necessary assistance to prevent falling. This brief demonstration requires 3-4 minutes but is an important step to insuring the safety of each student.
6. Following this demonstration, the teacher will invite each group of students to form its own *circle of support* and allow each member of the group a turn in the center. The teacher should move from group to group assuring that students in the center have arms crossed properly and are keeping legs and back stiff. The teacher should likewise monitor students in the *circle of support* to see that they are gently providing the support necessary to keep their classmate upright and safe.
7. After each group member has had an opportunity to be in the center, the teacher will explain the significance of a *circle of*

support. Noting the names on each multi-use sticky label, the teacher will emphasize that these potential support individuals, like their classmates in the *circle of support* demonstration, are vital in preventing, or navigating, many of life's challenges. For these reasons, it is important that each student has a *circle of support* that can provide a stabilizing influence during times of difficulty.

8. Each student should remove his/her multi-use sticky label and return to his/her desk. The teacher will provide each student with the *Circle of Support Worksheet* (see Figure 1) where students will create a list of personal *circle of support* members. For the purpose of this activity, support members must be individuals with whom the student does not live. While family members with whom the student lives are valuable circle of support members, this teaching technique is focused on potential support members with whom the student does not live. Students are then assigned to complete the *Circle of Support Worksheet* as homework, working together with their parent(s)/guardian(s) to acquire the mailing address for two support members. The teacher should provide students one weekend to work with their parent(s)/guardian(s) in completing this homework assignment and returning it with addresses for two support members before continuing with the following lessons.

Lesson #2: (30 minutes)

1. The teacher will provide a sample personal letter and envelope (see Figure 2).
2. The teacher should emphasize the importance of an assertive communication style in letter writing (see the following points *a*, *b*, and *c*). Because the reader will not have the benefit of interpreting facial expressions and other body language, the written text must clearly communicate the writer's intentions. Additionally, the reader will not have the opportunity to immediately ask additional questions to help clarify the writer's intentions. To avoid confusion, when writing a letter it is important to do the following:

- a. Use "I" statements that clearly communicate one's thoughts, feelings, attitudes, and intentions.
 - b. Write clearly and confidently, avoiding passive words and phrases such as "I think, perhaps, maybe, I might, and I guess."
 - c. Express appreciation and respect for the reader while avoiding aggressive words and phrases such as "You should," "You better," and "You must."
3. Next, students will choose one of the two individuals from their *circle of support* for whom they have acquired a mailing address and to whom they will write a personal letter. The body of this letter must include the student's personal reasons for choosing to remain alcohol-free and a request to support this choice. Students may look at the sample letter (Figure 2) for guidance while writing their letter.
 4. After students have completed a draft of their letters, they should exchange letters with a classmate for peer editing.
 5. Students should use feedback from their peer editor in composing a final letter to be sent via the postal service.
 6. The teacher will provide each student with two envelopes. One envelope should be addressed to his/her support member. The other envelope should be self-addressed to the student and folded in half. Students may look at the sample envelope (Figure 3) for guidance while addressing their envelopes. When students have completed labeling each envelope, they should present both envelopes to the teacher for a final inspection. If the envelopes are correctly labeled, the teacher will give the student a stamp to place on each envelope (see Special Note at end of Assessment Technique). If the envelopes are incorrectly addressed, the student should be instructed to review the sample envelope and make necessary corrections.

- Students will place their completed letters and the self-addressed envelope in the envelope addressed to their support member. The teacher can assign each student to send his/her letter from home, or the class can go together to place each envelope with other out-going mail from the school.

Lesson #3: (30 minutes)

This lesson is designed for implementation within a week of Lesson # 2 to provide students with a timely opportunity to practice and reinforce the skills they learned previously.

- Students will write another member of their *circle of support*. Working independently, each student will include his/her personal reasons for choosing to be alcohol-free and request support for this choice.
- The teacher will again provide each student with two envelopes. Working independently, each student will address one envelop to his/her support member; as before, the other envelope is self-addressed and folded in half.

Assessment Technique

At the conclusion of Lesson # 3, *The Circle of Support Worksheet* (Figure 2), along with the letter and envelope, will be given to the teacher to assess student performance related to established lesson objectives. Students are assessed using a pass/fail approach based upon their completion of *The Circle of Support Worksheet* (Figure 2). To earn a passing grade, students must list at least 12 potential members of their *circle of support* with whom they do not live and mailing addresses for two individuals from this list.

Special Note

In this teaching technique, each student needs 4 postage stamps. If resources are limited for the teacher, the following adaptations may be made when implementing this technique:

- Do not place a stamp on the return envelopes. This adaptation cuts in half the stamps needed.
- Ask parents/guardians to provide stamps for their child.
- Ask school administration to either provide stamps or pay the expense of postage.
- Substitute postcards for envelopes. Using a 4x6 postcard can offer considerable savings on postage. This adaptation does not allow for inclusion of a return envelope and may decrease the likelihood that students will receive a letter of support from their support member. In addition, writing space is limited on postcards, restricting the amount of letter content that can be included. If this adaptation is used, it may be best to require students type letters using a smaller font (i.e., 9-point) on a word processor.
- Send letters using electronic mail (email). This adaptation requires each parent(s)/guardian(s) to provide a current email address for two *circle of support* members on the *Circle of Support Worksheet* (Figure 2). Additionally, each student will need a personal email account and access to a computer.

Table 1. Effects of Alcohol Use

Short-term effects	Long-term effects	Other risks
Impaired judgment	Memory loss	Interpersonal conflict (fighting)
Lowered inhibitions	Cognitive impairment	Legal trouble (crime, DUI)
Delayed reaction time	Cirrhosis of the liver	Risky sexual behavior
Impaired coordination	Gastrointestinal system disorders	Suicide
Impaired vision	Nutritional imbalances	Motor-vehicle crashes
Impaired speech	Hypoglycemia	Decreased academic

Impaired balance Difficulty walking Difficulty standing Loss of consciousness Impaired breathing Depressed heartbeat Sleep disturbances Emotional disturbances Hangover Overdose	Cardiovascular disease High blood pressure Stroke Cancer Alcohol abuse Alcoholism or alcohol dependence	performance Increased school drop-out rates Additional drug use
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Telljohann, S., Symons, C., Pateman, B. & Seabert, D. (2012). *Health education: Elementary and middle school applications* (7th ed.). New York, NY: McGraw Hill.

Figure 1. *Circle of Support Worksheet*

Name _____ Date _____

Circle of Support Worksheet

Part I: Use the space below to list at least 12 potential members of your *circle of support*. Examples may include parent(s)/guardian(s), grandparents, siblings, relatives, neighbors, coaches, parent(s) of a friend, friends of a parent, teachers, girl/boy scout leaders, music instructors, religious leaders, and others.

Potential members of my circle of support:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Part II: Working together with your parent(s)/guardian(s), choose two individuals with whom you do not live to be in your *circle of support*. Have your parent(s)/guardian(s) help you to find two potential support members' current mailing address. Include these two potential members of your *circle of support* and their current mailing address in the space below.

Dear Parent(s)/Guardian(s),
In upcoming lessons, students will write letters to two potential members of their circle of support listed above. To prepare for these exciting lessons, students need to have the name and address of these two individuals. Please take a moment and help your child acquire the necessary mailing addresses so that this experience can be successful and meaningful.

	Name	Mailing Address
Circle of Support Member # 1		

Circle of Support Member # 2		
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Figure 2. Sample Personal Letter and Envelope Examples

2345 Sampson Street
Seattle, WA 98011

September 22, 2011

Dear Uncle Bruce,

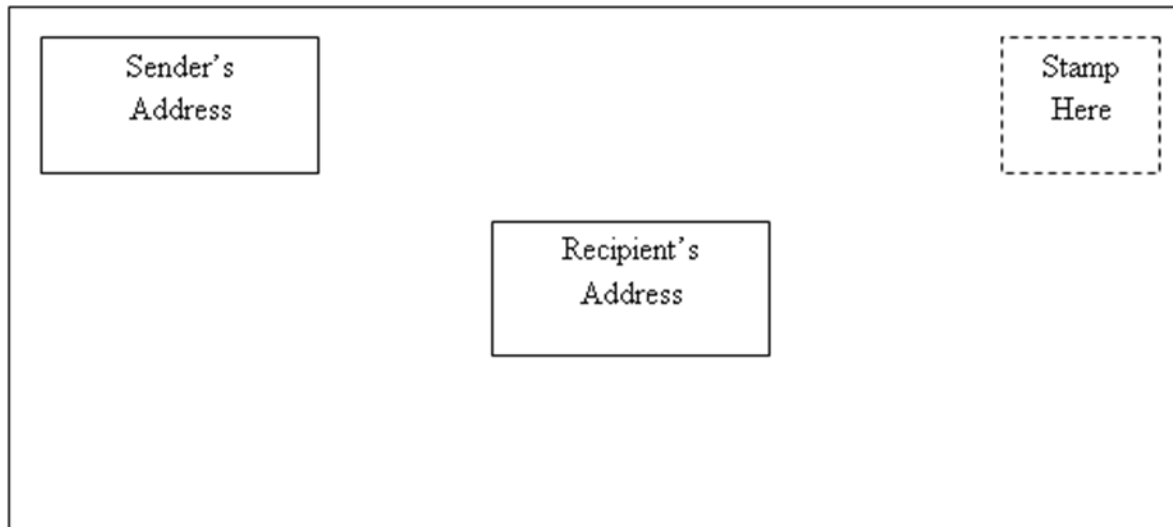
I recently learned in school about the many dangers of alcohol. Our lessons in school have helped me to make the decision not to drink alcohol. I want to avoid alcohol so that I will not become an alcoholic or do something I might regret. I also want to continue playing sports and do not want alcohol to mess up my chances of being the best I can be. Finally, I am afraid that drinking before I am an adult would make it harder for me to do well in school and learn everything that I need to learn.

I am writing you today to ask a very important favor. I am asking you to please maintain high expectations for me, my behavior, and the choices I make. I am confident that I will make good decisions, but I am sure that I will need help at times. Will you please commit to being supportive of my decision to be alcohol-free? I have included a return envelope for you and want to get a letter from you expressing your thoughts about my decision to be alcohol-free. Will you please write me back?

Thanks for your time, Uncle Bruce. You have always been a great uncle and I love you very much. I will look forward to receiving your letter.

Sincerely,

Jordan



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Let's Talk about G-E-R-M-S: Educating Elementary School Students about Germs and Hand Sanitation

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Submitted October 18, 2011

Abstract

This interactive lesson provides students with opportunities to gain behavior change knowledge and practice skills necessary to maintain healthy living in school.

Objectives: At the end of the activities in this teaching technique, students will be able to correctly: (1) demonstrate how to cover a cough and sneeze (2) identify situations when hand sanitizing is appropriate (3) explain the benefits of hand sanitation, and (4) demonstrate proper hand sanitation techniques.

Primary Audience: Pre-K through second grade students.

Introduction

Every day, millions of viruses, bacteria, and other pathogens, also known as “germs” (a catch-all phrase sometimes used), cause diseases that are transmitted from hand-to-hand due to, in part, poor hand sanitation habits. *Staphylococcus aureus* (a bacterium known to cause infections, including Staph infections), is normal flora that live in the nasal passage, throat, hair, and skin of more than 50% of all healthy people (U.S. Department of Health and Human Services, 2009). The human hands, which often come into contact with the nasal passage, throat, hair, skin, and other body parts, are constantly used to interact and exchange with others and have the potential to transfer viruses and bacteria. Hand sanitation is one way to prevent the spread of infections.

Children have a greater vulnerability to communicable illnesses than adults due to their increased exposure to environmental contaminants, their hand-to-mouth behavior, and their close proximity to the ground (Landrigan, 2004). Furthermore, the school setting can be one of the most dangerous zones for the spread of pathogens among students. This environment presents unique sanitation challenges because common school items, such as library books, cafeteria tables, chairs, writing utensils, doorknobs, and playground and gym equipment, are repeatedly shared among students. Thus, hand-to-hand transmission of germs is inevitable.

Viruses can spread in many different ways. For example, influenza viruses can spread by coughing and sneezing. The successful spread of illness among school-aged children often translates into missed school days and poor academic performance. For instance, the common cold alone cause approximately 22 million missed school days annually (Centers for Disease Control and Prevention, 2004). Similarly, more children under the age of five are hospitalized (20,000) for influenza viruses annually than from any other vaccine-preventable-disease (Centers for Disease Control and Prevention, 2011). When performed appropriately, hand washing can help prevent the spread of germs, and, therefore, reduce the number of school days missed among students.

Obviously, producing a safe and healthy learning environment for students requires that all students in the classroom are educated about the spread of germs, understand the benefits of hand sanitation, and become familiar with proper hand sanitation techniques. This interactive lesson provides

Health Education Teaching Techniques Journal, 2012, Volume 2.

elementary school students with opportunities to gain behavior change knowledge and practice skills necessary to maintain healthy living in school.

Objectives

At the end of the activities, students will be able to correctly:

- demonstrate how to cover a cough and sneeze;
- identify situations when hand sanitizing is appropriate;
- explain the benefits of hand sanitation; and,
- demonstrate proper hand sanitation techniques.

Materials and Resources

Sneeze Model Materials Needed:

- A spray bottle
- A paper or Styrofoam plate
- Food coloring (Green is used in this presentation.)
- Box of white facial tissue
- One pair of scissors
- 8oz of clean water
- Crayons or markers
- Figure 1 (Sneeze Model Instruction Sheet)

Instructional Materials Needed:

- A bar of soap
- Alcohol-based hand sanitizer (e.g., Germ-X[®])
- Figure 3 (G-E-R-M-S Song Lyrics Sheet)
- Figure 4 (Hand Sanitation Resource Sheet)
- Storybook about germs (Optional; part of Figure 4)

GERMS Hands Collage Activity Materials Needed:

- Crayons or markers (to be shared among the students)
- 8 ½ x 11 blank (white) paper (one sheet per two students)
- Poster board or display wall
- One pair of scissors
- One pencil
- Tape (roll) or a glue stick
- Figure 2 (GERMS Hands Collage Instruction Sheet)

Assessment Resource

- Figure 5 (Student Post-Activity Assessment Guide)

Primary Audience

This lesson is intended for pre-K through second grade students.

Procedure

This teaching technique consists of the Lesson Preparation and three Lesson parts. Part I involves educating students about germs (using the *Sneeze Model* to demonstrate how germs are spread). Part II involves educating students about hand sanitation and using the *G-E-R-M-S* Song to reinforce concepts. Part III involves a fun and creative art activity in which students are encouraged to use their imagination to help create a classroom *GERMS Hands Collage*. The collage will serve as a hand sanitation reminder for students. The total class time required for this lesson is 45-60 minutes.

Lesson Preparation**Creating the Sneeze Model** (See Figure 1):

Step 1: Use crayons or markers to draw a large face on a paper or Styrofoam plate. You also may use colored construction paper and yarn to create a 3-D face with hair.

Step 2: Punch a small hole in the middle of the lips on the plate with scissors or a pencil. Slowly push the spray bottle spout through the hole and secure a tight fit.

Step 3: Give your Sneeze Model a “fun” name (e.g., Sneezy, Sniffles). You also may solicit name suggestions from students during the activity. Allowing students to name the Sneeze Model encourages them to participate in the activity and provides them with a “catchy” and recallable name (rather than “Sneeze Model”) when they are asked to answer questions that require them to refer to the model. Prior to the activity, fill the spray bottle with approximately 8oz of clean drinking water. Keep the green food coloring and white facial tissue close by for the activity.

Creating the GERMS Hands (See Figure 2):

Step 1: Stack 5 sheets of 8 ½ x 11 blank (white) papers together and fold them in half.

Step 2: Open the folded papers. On the top sheet of paper, draw or trace (with a pencil) a handprint on each side of the folds

Step 3: Using a pair of scissors, cut the fold down the center. Now you will have two stacks of papers. Hold one stack of papers together and cutout the handprint. Repeat these steps for the second stack. You should end up with 10 handprints. Steps 1-3 are repeated until you have handprints for the class of students.

Step 4: Prepare your display. Use a poster board or section off wall space in the classroom to display the handprints.

Lesson Part I

Before beginning the Part I learning activity, write the lyrics to the G-E-R-M-S Song (see Figure 3) on a blackboard/whiteboard or any other display for the students to see. Arrange students in a semi circle on the floor or in chairs. Pretest the students’ knowledge of germs by asking them the following questions/actions: “*Raise your hand if you know what germs are.*” Yield for responses. Allow students to share their answers. Then, ask students, “*Do you know where you can find them?*” Go around the classroom and ask the students to verbally list the places where germs may live (e.g., bathroom, kitchen, animals, playground, and home). Tell students, “*Germs are everywhere! Germs are so small you cannot see them. Sometimes if they get into our tummies they can make us feel sick.*” Use the *Hand Sanitation Resource Sheet* (see Figure 4) to assist with this activity. *Optional: Read the students a short story about germs. The book: “Germs Are Not for Sharing” by Elizabeth Verdic (see Figure 4) provides a good story to introduce 4-7 year olds about germs. Other books about germs may be used to help with this theme.*

Take out the “Sneeze Model.” *Name your model yourself or solicit names from students.* Tell students, “*This is my friend (_____). She/he is sick with a cold and has to sneeze. Uh oh! Ahhh, ahhh, ahhh, chooooooosooooo!*” (Lightly spray some of the students with the Sneeze Model to demonstrate what happens when someone sneezes without covering his/her nose and mouth. *Note: Do not pour the green food coloring into the bottle at this time.* Allow the students to react. Explain to the students, “*This is what happens when you sneeze and do not cover your mouth and nose. We can spread bad germs that live inside our bodies.*” Ask students, “*What do you think will happen if one of you touches*

something on which (_____) sneezed?" Yield for responses. *Note: while the students are discussing this question, add 7-10 drops of green food coloring (or any other color) to the Sneeze Model, lightly shake the spray bottle, and prime the spray bottle with the green food coloring into a tissue.* Tell students, "When you cough or sneeze, you should use a tissue. If you do not have a tissue then you should use your sleeve or shirt. Never cough or sneeze into your hands. Ask students, "Does anyone know why we should never cough or sneeze into our hands?" Yield for responses. Explain to students, "When we cough or sneeze into our hands, our hands are now filled with germs. We can spread our germs all around the classroom by touching things with our germy hands."

Again, use the Sneeze Model to demonstrate how to catch a sneeze into facial tissue. Tell students, "Uh oh, I think my friend (_____) has to sneeze again. Quickly grab a tissue! Ahhh, ahhh, ahhh, choooooo!!!!!" (Hold the white facial tissue over the Sneeze Model's mouth and spray the bottle 2-3 times). Ask students, "What happened this time when (_____) sneezed?" Yield for responses.

Explain that the germs are now in the tissue (Show students the green water stains in the tissue). Tell students, "We can now place the tissue with all the germs in the trash so we don't spread germs." Finally, demonstrate how to cough or sneeze into clothing. Use your own shirt or sleeve and pretend to cough and sneeze in it. Have students practice by pretending to cough and sneeze into their sleeves and shirts. Refer to the Centers for Disease Control and Prevention's (CDC) *Cover Your Cough* (Centers for Disease Control and Prevention, 2010) instruction sheets for further details.

Lesson Part II

Pretest students' knowledge of hand sanitation by asking the following questions or requesting the following actions: "Raise your hand if you know how to wash your hands." Wait for responses. Invite 1-2 students to verbally explain the steps they would take to wash their hands. Ask students, "Why is it important to wash your hands?" Yield for responses. Review the benefits of hand washing. Refer to the *Hand Sanitation Resource Sheet* to assist you with this activity. Explain to students that, "We should always wash our hands so we don't spread germs. Germs can travel very far and very fast. Germs like to live on our hands." Ask students, "When should we wash our hands?" Yield

for responses. Review the appropriate situations to sanitize hands. Refer to the *Hand Sanitation Resource Sheet* (see Figure 4).

Take out an alcohol-based hand sanitizer and a bar of soap. Ask students, "Does anyone know what these are?" Yield for responses. Explain to students, "We can clean our hands by using soap and water to wash them." Demonstrate the steps to wash your hands (i.e., act out the actions of turning the faucet on and soaping your hands). Refer to the *Hand Sanitation Resource Sheet* (see Figure 4). Invite 1-2 students to demonstrate the steps for hand washing with soap and water. Ask students, "How many of you have ever used a hand sanitizer?" Yield for responses. *Note: Be sure to sound out the word "sanitizer."* Explain to students, "It is called a sanitizer because sanitizers clean things, even our hands. The clear jelly has a special ingredient in it that can get rid of germs." Using an alcohol-based sanitizing liquid, demonstrate the steps to sanitize your hands. Squeeze or pump an alcohol-based hand sanitizing liquid into your hands and rub your hands together. Refer to the *Hand Sanitation Resource Sheet* (Figure 4). Allow each student to experience the sensation of using an alcohol-based hand sanitizing liquid by pouring or pumping a pea size amount into the palm of their hands. Have them quickly rub their hands together and allow them to dry. Invite 1-2 students to demonstrate the steps for hand sanitizing with an alcohol-based hand sanitizing liquid.

After you have thoroughly reviewed the steps for hand sanitation, ask students to help you sing a song about germs and keeping hands clean (see Figure 3). Go to the location where the words to the G-E-R-M-S song are written. Ask the students, "How many of you know the song B-I-N-G-O?" Explain to students that the G-E-R-M-S song sound like B-I-N-G-O, but it has different words. Ask students to listen to you sing the song first and then sing it together as a class. *Note: Be sure to act out the actions to the song as presented in Figure 3. Point to the lyrics as they are sung.* After singing the song 3 or 4 times, prepare for the GERMS Hands Collage activity.

Lesson Part III

Take a short break and allow the students to return to their regular seats. Prepare for the GERMS Hands Collage activity in Figure 2. Distribute one precut paper hand to each student. Remind students of all the places they might find germs. Distribute crayons or markers. Ask them to draw and color the

most dirty, messy hand they have ever seen. Describe what a hand full of germs might look like (i.e., It may have frog slime, dog hair, dirty oil, dust, sand, tomato sauce, chewing gum, and even runny nose fluid on it!). Allow time for students to create their germ hand. Once students have completed drawing and coloring their GERMS Hands, ask them to share what they have created. One by one, tape or glue each

Assessment Technique

At the end of the class period, the facilitator/teacher should conduct a review session to assess students' understanding of all the concepts learned. Informally ask students about germs and where they might be found around the classroom, playground, and school. Query their knowledge about appropriate situations to sanitize their hands (e.g., before lunch, after recess). Review the reasons why it is important for students to sanitize their hands. Ask them to demonstrate the appropriate methods of covering a cough and sneeze. Revisit the

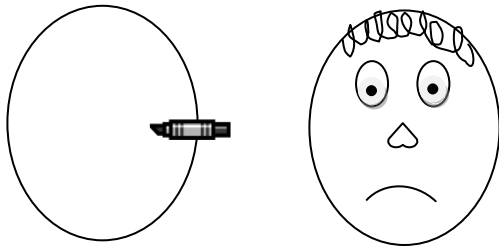
paper hand into a collage on the GERMS Hands display board/wall section. In the middle of the GERMS Hands Collage, write "GERMS GERMS GERMS!" or any other message(s) such as "Sanitize Your Hands," "Keep Our Classroom Germ Free," or "Cough, Sneeze, GERMS OH MY!" Invite other classes to view the students' collage (see Figure 2). Have students explain their individual hand. techniques for proper hand sanitation. Ask the

students to demonstrate the steps for hand sanitizing with soap and with an alcohol-based hand sanitizer.

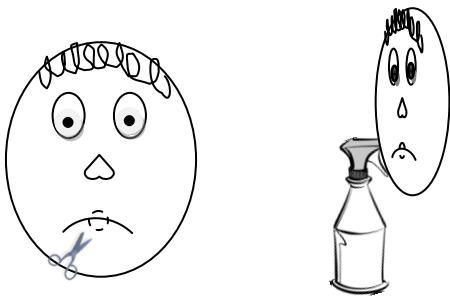
Assess the students' understanding of the GERMS Hands Collage activity by asking them to explain what they drew and colored on their GERMS Hands. Ask students to describe how they can keep their hands from looking like the GERMS Hands. Monitor for positive behavior changes in the following weeks and reinforce learning activity concepts. Moreover, the facilitator/teacher may provide students with basic hypothetical scenarios to assess their ability to apply behavior change knowledge (see Figure 5).

Figure 1
Sneeze Model Instruction Sheet

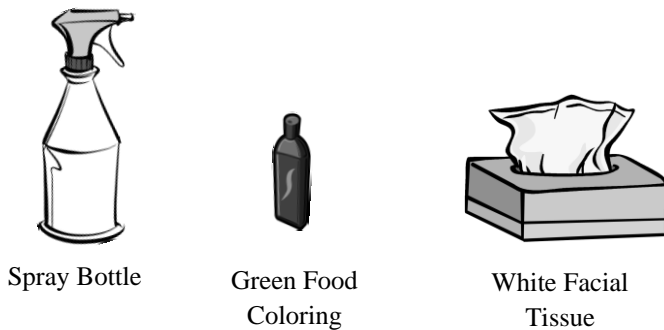
Step 1: Use crayons or markers to draw a large face on a paper or Styrofoam plate. You also may use colored construction paper and yarn to create a 3-D face with hair. *Note: Draw a mouth 1 ½ to 2 inches from the bottom of the plate to allow for the spray bottle spout to fit easily between the lips of the mouth.*



Step 2: Punch a small hole in the middle of the lips on the plate with scissors or a pencil. Slowly push the spray bottle spout through the hole and secure a tight fit. *Note: You may use tape on the back of the plate to reinforce the spray bottle to the plate.*



Step 3: Give your Sneeze Model a “fun” name. Prior to the learning activity, fill the spray bottle with approximately 8oz of clean drinking water. Keep the green food coloring and white facial tissue close by for the activity.



Spray Bottle

Green Food
ColoringWhite Facial
Tissue

Figure 2
GERMS Hands Collage Instruction Sheet



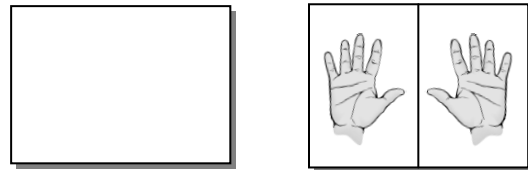
Classroom Poster Example

Instructions:

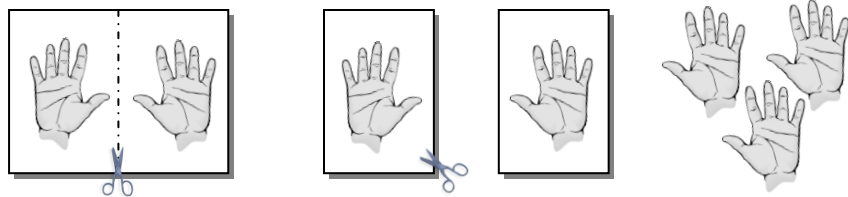
Step 1: Stack 5 sheets of 8 ½ x 11 blank (white) papers together and fold them in half.



Step 2: Open the folded papers. On the top sheet of paper, draw or trace (with a pencil) a handprint on each side of the folds.
Note: Draw the handprint large enough so students can draw and color details all over the handprint.



Step 3: Using a pair of scissors, cut the fold down the center. Now you will have two stacks of papers. Hold one stack of papers together and cutout the handprint. Repeat these steps for the second stack. You should end up with 10 handprints. *Note: Repeat steps 1-3 to create enough handprints for your class size.*



Step 4: Prepare your display. Use a poster board or section off wall space in the classroom to display the handprints.

Step 5: Distribute crayons or markers. *Note: Glitter and other craft items may be used.*

Step 6: Ask the students to draw and color the most dirty, messy hand they believe they have ever seen. Describe what a hand full of germs might look like (i.e., it may have frog slime, dog hair, dirty oil, dust, sand, tomato sauce, chewing gum, and even runny nose fluid on it!). Assist them with the activity as needed.

Step 7: Once the GERMS Hands are completed, ask students to share what they have created.

Step 8: Tape or glue each hand into a collage on the GERMS Hands display board/wall section. In the middle of the GERMS Hands Collage, write "GERMS GERMS GERMS!" or any other message(s).

Step 9 (Optional): Invite other classes to view the students' collage. Have your students explain their creations.

Figure 3

G-E-R-M-S Song Lyrics

G-E-R-M-S Song

Lyrics written by: Lincoln A. Gibbs

[Sung to the musical tune: B-I-N-G-O]

When dirt and grime get on your hands,
GERMS is what we call them,
G—E—R—M—S,
G—E—R—M—S,
G—E—R—M—S,
 and **GERMS** is what we call them!

Actions: Flash all fingers in the air

Soap and water clean our hands,
 to keep the **GERMS** from growing,
SCRUB, SCRUB, in between,
SCRUB, SCRUB, in between,
SCRUB, SCRUB, in between,
 and **GERMS** is what we call them!

Actions: Rub fingers inside on both hands

To clean our hands we also use,
 a **SANITIZING** liquid!
QUICK, QUICK, round and round,
QUICK, QUICK, round and round,
QUICK, QUICK, round and round,
 and **GERMS** is what we call them!

Actions: Rub hands together and around

Emphasize words in **BOLD*

Figure 4
Hand Sanitation Resource Sheet

(Optional) Storybook on GERMS:

Germs Are Not for Sharing by Elizabeth Verdick
Free Spirit Publishing
January 15, 2006
ISBN #: 1575421976

What are GERMS?

- Germs are tiny critters that can make you sick.
- You need a special machine called a microscope to see germs.
- Germs can live inside our bodies.
- We can spread germs when we cough or sneeze in our hands and then touch something or someone.
- Germs can even be on food.

Where are GERMS Found?

- Germs are at school, home, on the playground, in the bathroom, on animals and more!
- Germs live in runny noses and under your fingernails, especially if you pick your nose.
- Germs like to hangout on our hands.
- Germs are on our shoes because we step on them every day.
- Germs are on trash, spills and dirt.
- Germs are on door handles, tables and library books.
- Germs are in the cafeteria and gym.
- Germs are everywhere!

When to Sanitize your Hands?

- Before eating your lunch or snack.
- After using the toilet.
- After playing outside.
- After playing with animals and insects.
- After sneezing, coughing or blowing your nose.
- After handling trash or waste.
- Sanitize your hands with soap and water whenever they look DIRTY!

How to Use an Alcohol-Based Hand Sanitizer:

Squeeze or pump a pea size amount of hand sanitizing liquid into your hands.
Rub your hands together quickly before the liquid dries.
Let your hands dry for 30 seconds before you touch anything.

How to Hand Wash with Soap and Water:

Use warm water to wet your hands.
Apply liquid, bar or powder soap to your hands.
Rub your hands together for at least 20 seconds (*sing the "Happy Birthday Song" x2*).
Scrub in between your fingers and underneath your fingernails.
Wash the soap off and dry your hands.

Health Education Teaching Techniques Journal, 2012, Volume 2.

Figure 5
Student Post-Activity Assessment Guide

To assess students' ability to apply behavior change knowledge, verbally review these basic hypothetical scenarios with them. Ask them to tell you what the person(s) in each scenario should do, use, write, draw, or tell.

1. Billy has a pet dog at home. He loves to play with his dog. It is dinner time and Billy's dad tells him to come and eat. What should Billy do first before eating his dinner?
2. Maggie is in the bathroom and cannot remember what she needs to use to wash her hands. What should Maggie use to wash her hands?
3. Jamal has a cold. He is really feeling sick. Jamal feels a sneeze coming. What should Jamal do to catch his sneeze?
4. Ally is learning about germs at school. Ally's teacher asks her to tell the class where she can find germs. What should Ally tell the class?
5. Rhonda has to use the bathroom. After flushing the toilet, what should Rhonda do before she leaves the bathroom?
6. Sarah has a sore throat and she cannot stop coughing. Sarah puts her hands over her mouth and catches the cough in her hands. Should Sarah cough in her hands? What should Sarah do or use to catch her cough?
7. David and Kai are making a poster about germs. What should they write or draw on their poster?
8. Maria is teaching Rodney how to wash his hands with soap. What steps should Maria tell Rodney to take?
9. Evan has a runny nose. He blows his nose in a tissue and then throws it in the trash. There is no soap and water for Evan to wash his hands. What can Evan use to sanitize (clean) his hands?
10. Farah has been playing on the playground with her friends. Farah is feeling hungry and reaches in her backpack to get her snack. What should Farah do before eating her snack?

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Making Decisions: Paired-Comparison Analysis

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Abstract

The information in this article arms students with a strategy known as paired-comparison analysis for deciding the best option for resolving a problem or an issue.

Objectives: Students engaged in this teaching activity will demonstrate the use of paired-comparison analysis to develop decision-making skills that enhance health by 1) citing the options (e.g., solutions, interventions) for a given health problem, 2) citing the pros and cons for the options, 3) comparing each option against other options, and 4) deciding the best option.

Primary Audience: High school and college (undergraduate and graduate) students in health courses, particularly those in which decision-making is a focus.

Introduction

The teaching technique used by instructors, among lecture, discussion, questioning, and so on, is one key factor regarding whether students will more readily develop decision-making skills. In a study by Lammers and Murphy (2002), various teaching techniques of 48 faculty members in 58 of their classes were monitored, with results showing that lecture was the principal method of instruction in 50% of those classes. Another 15% of faculty reported that discussion was the second most used method. Lecturing in the classroom has long been a principal technique to teach students regardless of class size or upper or lower division courses at the high school and college level (Blackburn, Pellino, Boberg, & O'Connell, 1980). Antepohl and Herzog (1999), conducting a controlled, randomized study, compared two methods (lecture-based learning or problem-based learning) for students to gain decision-making skills. Students' test scores for essay questions were significantly lower for students in the lecture-based course compared to students who were taught using interactive, problem-based teaching techniques. Additionally, it was found by these authors that students preferred other interactive teaching techniques over lecture to gain factual knowledge, to provide additional learning resources, and to provide the opportunity to work in teams.

Helping students develop decision-making capabilities is supported by results of The Higher Education Research Institute at The University of California Los Angeles (UCLA) in 2009. Specifically, in their survey of 22,562 full-time college and university faculty members at 372 four-year colleges and universities nationwide, it was revealed that, of the faculty surveyed, 99.6% indicated that critical-thinking skills are very important or essential for undergraduate college education (DeAngelo et al., 2009). Moreover, decision-making skills have been shown to be very important for undergraduate education (DeAngelo et al., 2009).

The teaching technique described in this article arms students with a strategy known as paired-comparison analysis for deciding the best solution for resolving a problem or an issue. This decision-making technique has roots in the Analytical Hierarchy Process (AHP) in which extensive mathematical models are used to drive decision

making (Saaty, 1980). The technique presented here, however, is a simple, time-efficient method adapted by the authors of this article for high school and college students to make health-related decisions. The paired-comparison technique allows students to analyze a problem and derive a solution from two points-of-view: (1) macro and (2) micro. In the macro-view, students reflect upon a public health problem (e.g., heart disease, cancer, unintentional injuries) from the view-point of a public health professional or other person responsible for the health and safety of others. The micro-view involves students making an individual decision (e.g., to smoke or not smoke; to drink whole milk or skim milk). For a health-related issue, see Table 1 in which macro- and micro-views on alcohol-impaired driving are described.

In paired-comparison analysis, a range of options (See Step 1 in Table 2) is analyzed and pro and con options are presented (See Step 2 in Table 2). The results are tallied to find the best answer. Students compare each option against each of the other options (See Step 3 in Table 2), determining their preferred option in each case. The established criteria (e.g., effectiveness, cost, feasibility, acceptability) should provide a practical way for choosing the best option to a problem. When the results are tallied, the option with the highest score is the preferred option.

Objectives

Students completing this activity demonstrate the use of paired-comparison analysis to develop decision-making skills by:

- Citing the options (e.g., solutions, interventions) for a problem.
- Citing the pros and cons for the options.
- Comparing each option against other options.
- Deciding the best option.

Materials and Resources

The Paired-Comparison Analysis Worksheet (Table 2) is needed. Having the students handwrite the options on the worksheet allows them to refer to the options during the activity. Parts of the worksheet

(e.g., list of the options and the comparison grid), however, could be displayed either on a screen or white- or chalk-board. The time needed to complete the paired-comparison activity can vary from 15 minutes to a typical class period of approximately 50 to 60 minutes. The time allotment may vary greatly depending on the problem being evaluated and students' capabilities.

Primary Audience

The technique is most applicable for students in undergraduate and graduate collegiate health courses and high school health courses. Although it readily can be applied to most health topics, the technique can be used in any class involving decision-making as part of the course.

Procedure

This learning activity could be utilized as an in-class or out-of-class activity in several ways such as:

- Individual students completing the activity with later comparison to classmates' results.
- Small teams completing the activity with later comparison to the other teams.
- The instructor leading the entire class through the activity.

The following six points apply regardless of the venue:

1. For any given problem (e.g., alcohol-impaired driving, overweight/obesity, physical inactivity), a list of options (e.g., solutions, interventions) is developed from various sources: (a) instructor provides, (b) students brainstorm for ideas, or (c) instructor assigns students to locate options from a literature search or interviewing an expert. A good source for interventions or solutions of many health topics is *The Community Guide* (2011) found at <http://www.thecommunityguide.org>.
2. For each option, students should list a pro (strength; reason for trying) and a con (weakness, might hinder trying).

3. Develop criteria with which to judge or evaluate the options. Examples of criteria might include: (a) effectiveness—Does it work?, (b) costs—Is it affordable?, (c) feasible—Is it capable of being accomplished?, (d) sustainable—Do the effects last?, (e) legality—Is there a law against it?, and (f) Is personal freedom restricted? Other resources that include a list of decision criteria are the Runyan (1998) criteria or the Hanlon and Pickett method (1984) (See the Reference section).
4. Compare each option against each other using the paired comparison grid (See Step 3 of Table 2). Circle the letter of the option that was selected.
5. After the comparisons have been completed, students should count the number of times each option was selected by counting the number of circles around each option's corresponding letter. Enter the count for each option in Step 1 of Table 2. Rank each option numerically ordering each option based on its total count. For clarification, see the example presented in Table 3.
6. Reporting of selections. If working in teams, a representative from each team will write his/her teams' best choice on the whiteboard/chalkboard. The team representatives then briefly report the reasons for choosing their option. Alternative approaches for reporting selections involve the students working individually or the entire class going through the paired-comparison analysis together. classes to view the students' collage (see Figure 2).

Assessment Technique

The instructor and students share the outcome of an individual student's or a team's paired-comparison analysis with best practices for judging found in reputable sources such as: *The Community Guide* (2011), the Cochrane Library (2011) or a peer-reviewed journal article in which the specific problem or issue is addressed. The instructor then compares the students' worksheet results to the best practices reported in reputable sources. The

instructor may award full or partial credit to students based on the following:

1. Listed a minimum of three potential intervention options.
2. Listed one pro and one con for each intervention option.
3. Compared each option to each other option using established criteria. Evidenced by circling of the best option for each comparison.
4. Completed Step 1 of Table 2 by totaling and ranking options.
5. Selected an option meeting best practices by responding to the questions in Step 4 of Table 2.
6. Shared the selected options along with the rationale behind the decision. Individual student or a team representative presents the selected option and rationale orally to the class and instructor.

Figure 1
Macro- vs. Micro-view Options for Alcohol-Impaired Driving

Macro-view options

- Minimum legal drinking age laws
- Sobriety checkpoints
- Ignition interlocks
- Designated driver programs
- School-based instructional programs
- Mass media campaigns
- 0.08% blood alcohol concentration (BAC) laws

Micro-view options

- Never get into a car to be driven with a person who has been drinking.
- When going to a party, bar, or a restaurant, use a “designated driver”—a nondrinker should do the driving.
- Avoid the most dangerous driving times—between 8:00 pm and 4:00 am on Friday and Saturday
- While driving, keep a lookout for erratic driving behavior and be ready to take evasive action.
- It is safe to ride with a person who is not staggering or slurring his or her speech.

Figure 2
Paired-Comparison Analysis Worksheet

Step 1: List the options you will compare.

Options	Total	Rank
A:		
B:		
C:		
D:		
E:		
F:		

Step 1: Pros/cons—For each option, give a pro and a con.

Options	Pros (support for trying)	Cons (might hinder trying)
A:		
B:		
C:		
D:		
E:		
F:		

Step 3: For each square in the grid below, compare the option in the row to the option in the column and circle the best option's letter. Examples of criteria:

- | | |
|---|---|
| (1) Effective—Does it work? | (4) Sustainable—Do the effects last? |
| (2) Cost—Is it affordable? | (5) Legality—Is it legal? |
| (3) Feasible—Is it capable of being done? | (6) Restriction—Is personal freedom restricted? |

	B:	C:	D:	E:	F:
A:	A or B	A or C	A or D	A or E	A or F
B:		B or C	B or D	B or E	B or F
C:			C or D	C or E	C or F
D:				D or E	D or F
E:					E or F
F:					

Step 4: Count the circles for each letter, and enter them in the appropriate spaces provided in Step 1 followed by ranking them in numerical order.

Which option was chosen as being the best? _____

What is its greatest strength (pro)?

Table 3: Paired-Comparison Analysis Example—Decreasing Risk of Alcohol-Related Motor Vehicle Crashes

Step 1: List the options you will compare.

Options	Total	Rank
A: Ignition interlocks	1	5
B: Mass media campaigns	4	2
C: Zero tolerance – under 21 years	5	1
D: Sobriety checkpoints	3	3
E: Increase price of alcohol	0	6
F: Lower blood alcohol concentration (BAC) for convicted offenders	2	4

Step 2: Pros/cons – For each option give a pro and a con.

Options	Pros (support for trying)	Cons (might hinder trying)
A:	Driver cannot bypass this engineering control that disables motor vehicle if breathalyzer test is not passed.	Initial costs are high.
B:	Can reach a very wide audience. Can focus on legal and health consequences.	Costs to implement effective program may be high. Result of a poorly implemented program may be questionable.
C:	Law that prohibits underage drinking	Some believe it unjustly punishes them for the irresponsible behavior of the subgroup that drives after drinking.
D:	Removes offenders from the road	Results in inconvenience and intrusion on driver privacy
E:	Reduces heaving drinking and may even reduce violence and crime.	May unjustly punish those who drink responsibly by increasing the price.
F:	Establishes a separate, lower illegal BAC to target convicted offenders.	Officers may have a difficult time identifying convicted offenders who show no signs of impairment due to the lower BAC limit

Step 3: For each square in the grid below, compare the option in the row to the option in the column and circle the best option's letter. Examples of criteria:

- (1) Effective—Does it work? (4) Sustainable—Do the effects last?
- (2) Costs—Is it affordable? (5) Legality—Is it legal?
- (3) Feasible—Is it capable of being done? (6) Restriction—Is personal freedom restricted?

	B: <input type="radio"/>	C: <input type="radio"/>	D: <input type="radio"/>	E: <input type="radio"/>	F: <input type="radio"/>
A: <input type="radio"/>	A or B	A or C <input type="radio"/>	A or D <input type="radio"/>	A or E <input type="radio"/>	A or F <input type="radio"/>
	B: <input type="radio"/>	B or C	B or D <input type="radio"/>	B or E <input type="radio"/>	B or F <input type="radio"/>
		C: <input type="radio"/>	C or D	C or E <input type="radio"/>	C or F <input type="radio"/>
			D: <input type="radio"/>	D or E	D or F <input type="radio"/>
				E: <input type="radio"/>	E or F
					F: <input type="radio"/>

Step 4: Count the circles for each letter, and enter them in the appropriate spaces provided in Step 1 followed by ranking them numerically.

Which option was chosen as being the best?

Zero Tolerance Law In the Zero Tolerance Law, underage drinking (under age 21) is prohibited. Zero Tolerance laws may result in decreased alcohol consumption by young adults leading to decreases in alcohol-impaired motor vehicle crashes.

What is its greatest strength (pro)?

In the Zero Tolerance Law, underage drinking is prohibited. Zero Tolerance laws may result in decreased alcohol consumption by young adults leading to decreases in alcohol-impaired motor vehicle crashes.

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