

HEAD (Health Education Across the Disciplines): Addressing Intervention Strategies Across the Disciplines for Alcohol, Tobacco, Drugs, & Addiction

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Abstract

Health Education Across the Disciplines (HEAD) is an intervention strategy to integrate alcohol, tobacco, drugs, and addiction lessons into disciplines other than health. Follow-up integration activities to *Defining Addiction Activity* is presented. Two other lesson plan examples of integrating alcohol, tobacco, drugs, and addiction lessons into disciplines other than health are presented.

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Keywords: school health education, California health curriculum, HEAD, intervention strategies

Statement of the Problem

Alcohol, tobacco, other drugs, abuse, misuse, and addiction are some of the most significant, continuous, and widespread problems among youths, adolescents, and young adults in the United States. The levels of substance abuse, misuse, and addiction by young people have dramatically increased during the past 12 years. Numerous significant statistical research studies have indicated that many past drug education programs and efforts are flawed, unrealistic, and have failed.

Historical approaches to drug education from 1970 through 2000, based on flawed goals, have been ineffective. Scare tactics, excessive use & effect information, ex-addicts testimonials, “just say no”, and the DARE program are a few of the conventional drug education programs that have failed overall with the notion that we have the ability to prevent experimentation with drugs among teenagers.

Several reasons for the failure of past drug education programs: First, teachers have too much to teach in the current health K - 12 curriculum. Second, when compared to other subjects that are required to be taught in public schools, the discipline of health education is not a high priority. Reading, writing, and math, for example, have the highest priority in a school

district curriculum. These priorities are well justified. After all of the high priority subjects are taught, realistically what percent of classroom time remaining is used to teach health?

The California Health Framework is the curriculum guide for the scope-and-sequence plan for health education in the public schools (CDE, 2003). The nine health content areas to be covered are: personal health, nutrition, individual growth and development, injury prevention and safety, consumer and community health, environmental health, communicable and chronic diseases, family life education, and alcohol, tobacco, and other drugs. How much time would be allotted to teach alcohol, tobacco, and other drugs? The student becomes “short-changed” because he/she is only getting pieces of the material. For example, a 25-minute video on drug education may be shown that will provide certain facts; then the students are expected to take a quiz and hope for the best. The students are given the facts, (cognitive domain), but they are lacking in the skills (psychomotor domain), to make the right choices which will impact and influence their values, beliefs, and behavior (affective domain).

Third, of the traditional drug education programs that have been used in schools, the curricula

rarely included follow up lessons to promote reinforcement of healthy behaviors, attitudes, values, and lifestyle changes. Thus these programs were seen as ineffective and a new program would be tried the following year. This cycle has continued throughout the past decade. Fourth, teachers are confronted with several barriers to successful health teaching: 1) there is an overwhelming wealth of health information that is continually changing, 2) it is difficult to differentiate conflicts in the health literature, 3) the current social climate dictates that teachers must be careful when presenting controversial subject matter, 4) some administrators place a low priority on health education, and 5) the continuing education for school teachers is costly.

The purpose of this paper is to propose an integrated approach to teaching alcohol, tobacco, and other drugs in grades nine through twelve. An effective health education program which will address intervention strategies for alcohol, tobacco, other drugs, abuse, misuse, and addiction to enhance instruction in the classroom, will be introduced.

Integrating Health Throughout the Curriculum

The integration of health content in other subject areas reinforces the knowledge, attitudes, beliefs, values, and skills learned. Such integration will also help the teacher save time and will cover the required subject matter in the allotted class time. One approach to integrating health into other subject areas that is introduced here is Health Education Across the Disciplines (HEAD).

HEAD Overview

HEAD is a two year program that offers intervention teaching strategies across the disciplines for alcohol, tobacco, drugs, & addiction that will assist teachers in grades 9 – 12. The goal of the HEAD Program is to demonstrate through a series of lesson plans how teachers may integrate health into their respective disciplines.

Procedure and Two - Year Timeline

First Year

The program will focus on assessing the level of faculty awareness & campus, community, and grades 9 – 12 buy-in. The teacher needs to be able to present & describe this program to the school districts: school board, superintendent, principal, teachers, parents, and the community. If the program is approved, the teacher will be able to implement and integrate this program into their discipline for classroom learning experiences.

This program includes three interactive presentations on alcohol, tobacco, other drugs, & addiction. Appendix A is *Defining Addiction Activity* by Marty Axelson, Long Beach Unified School District, Long Beach, CA. Appendix B is the *Follow-Up: Defining Addiction Activity* by Vic Sbarbaro on how to integrate the activity by Marty Axelson across the disciplines. Appendix C by David Duffy and Appendix D by Kurt Osterland are additional lesson plans on how to integrate alcohol, tobacco, and drugs into other disciplines. Each interactive presentation will include the cognitive domain for the students to acquire (information & facts), the psychomotor domain for the students to build links and bridges to use this knowledge in making responsible choices which will impact and influence their values, beliefs, and behavior (affective domain).

The three interactive strategic interventions will be presented by the author and two former CSU, Chico students from the author's class, HCSV 261, Health Education for Secondary School Teachers. These two students are Mr. David Duffey, and Mr. Kurt Osterlund.

The program should be implemented into the high schools' curriculum approximately (two weeks – one month) prior to presenting the two day "EVERY 15 MINUTE" program, which discourages adolescents from drinking and driving as well as getting into a car with someone who has been drinking.

Second Year

After the program has been presented, assistance needs to be offered to teachers in translating the

program into their classroom learning experiences. An evaluation of the effectiveness of the health education program's competency will be determined. The evaluation process could include: a pre-test / post-test survey. A pre-test anonymous survey could be administered during the beginning of the semester to Grades 9, 10, and 11, before this program is to be implemented. Then a post-test anonymous survey could be administered to these grades the following year (Grades 10,11, & 12).

Another type of evaluation can take place which would include all the necessary vital statistics for those grades at that particular school. The statistics could include all accidents, incidents, injuries, fatalities, and school drop outs that were alcohol, tobacco, other drug, or addiction related.

Data will be collected and interpreted. The results will be presented with recommendations and conclusions.

The necessary changes will be made to make the program more effective. The program will again be implemented the following year with the

focus on the dissemination of the information of what we have learned. If the program has proven to be effective for two consecutive years; then HEAD (Health Education Across the Disciplines) might even become an institutionalized program throughout the state & other states.

Health Education Implications

Health Education Across the Disciplines is only one example of integrating health content into other subject areas. Other ideas need to be proposed and examined that will have a positive impact on reinforcing and adopting a healthy lifestyle. This program might only be applicable and meet the needs to those school districts that indicate a problem with their student population regarding alcohol, tobacco, other drugs, and addiction. Also, faculty in each school district might oppose the buy-in to this program. Interventions are needed that assist adolescents with the transition of this knowledge and skills into daily healthy behaviors and lifestyles. These interventions should make adolescents more aware of the short and long term consequences of alcohol, tobacco, other drugs, and addiction.

References

California Department of Education. (2003). Health framework for California public schools kindergarten through grade twelve. Retrieved August 29, 2003, from <http://www.cde.ca.gov/cdepress/health-framework/2003-health-framework.pdf>

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Appendix A

Defining Addiction Activity

Lesson Plan by Marty Axelson (Long Beach Unified School District)

Objective

Following instruction, the student will be able to describe what they possibly have to gain if they stay “drug free” and what they have to lose if they start to experiment with drugs.

Time

One class period.

Materials

Each student needs one clean piece of paper and a pen or pencil.

Lesson

1. Have the students fold their paper in half length wise. Give it a good crease. Have students fold their paper length wise again, so that they have sort of a narrow strip. Students should then fold the strip in half twice, so that the paper is in a small folded rectangle. Now when student unfold their paper, there should be sixteen equal size boxes (four columns of four).
2. In the far left column of four boxes have student write the names of the four people that mean the most to them. The four most important people in their lives. One name in each box. In the next column have student identify their four most important possessions (one in each box) including pets. In the third column have students identify the four activities they enjoy the most. In the fourth column have student identify their four most important goals.
3. All sixteen boxes should be filled. Now have students teach each column along the crease and put them back in order on their desk (as they were when they were attached). The four boxes in each column should be torn loose and put back in order as they were before we started tearing.
4. Tell students that essentially what they have in front of them in those sixteen boxes is a description of who they are. Have student select one box from each column and create a new column to the right with them.
5. We are finally getting to the point of this activity. Everyone understands that a drug addict is a person that is physically, psychologically, or emotionally dependent upon alcohol or another drug. The point of this activity is to give students the opportunity to imagine what it feels like to be an addict. Tell students that addiction eventually starts to steal pieces of the addict’s life away from him or her. Then go around the room with a trash can and have student throw the far right column of selected boxes (one from each of the original four columns) in the trash can. Do not let students switch any of the boxes.
6. Now tell the student that if they are not going to get help and the addiction continues, pieces of their life will continue to be taken away from them. Then have student select one box from each of the four columns and have them deposit them in the trash can.
7. Students should have two boxes left in each column. Tell student that in the real world the addict does not get to choose what parts of his/her life is lost. For the third round the teacher should go around the room and select one of the boxes from each column and throw them in the trash.
8. Have students look at what they have left. There should be one person, one possession, one favorite activity and one goal left. Have student write in their journals about how it felt to see parts of their life being taken away from them.

Follow-Up

Have student write an essay where they compare and contrast the quality of their life as an addict and a person who is drug free.

Appendix B

Follow-Up: Defining Addiction Activity

By Victor Sbarbaro

Materials

- Appendix A: Axelson, M. *Defining Addiction Activity*. Long Beach, CA: Long Beach Unified School District
- Appendix B-1: *Risk Continuums Associated with Alcohol, Tobacco, Drugs & Addiction*.
- Appendix B-2: *Follow Up Activities for Risk Continuums*.

Follow-Up: Defining Addiction Activity

Integration Into English

This would be a very good example of how the teacher could integrate the health content area: alcohol, tobacco, and other drugs into the discipline of English.

Have Students:

1. Write an essay on how does it feel to see parts of their life being taken away from them.
2. Write an essay where they can compare the quality of their life as an addict and a person who is drug free.
3. Write a letter to the person who is left in this activity and ask this person for help.

Integration Into Math

This would be a very good example of how the teacher could integrate the health content area: alcohol, tobacco, and other drugs into the discipline of math.

Have Students:

1. Graph charts comparing the effects of alcohol drunk in a two hour time frame using body weight for male and female.
2. Use different types of graphs (i.e., pie charts, bar graphs, line symbols) and graph alcohol-related deaths in different Northern California communities and regions.
3. Incorporate statistics and critical thinking math problems.

Integration Into Art, Music, & Drama

This would be a very good example of how the teacher could integrate the health content area: alcohol, tobacco, and other drugs into the disciplines of art, music, and drama.

Have Students:

1. Create an inspiring mural and anti-substance abuse signs with a message to abstain from alcohol, tobacco, and other drugs.
2. Research how many musicians have died from substance abuse.
3. Create a song, rap, or write a play that would encourage students to refrain from substance abuse.

Integration Into Geography

This would be a very good example of how the teacher could integrate the health content area: alcohol, tobacco, and other drugs into the discipline of geography.

Have Students:

1. Research adolescent deaths related to tobacco, alcohol, and other drugs within their high school, community, county, and state.
2. Research how many students have been suspended, expelled, and dropped out of school due to substance abuse within the county, followed up with a comparative student within the last five years.

Integration Into History

This would be a very good example of how the teacher could integrate the health content area: alcohol, tobacco, and other drugs into the discipline of history.

Have Students:

1. Research historical figures and celebrities who have died from alcohol, tobacco, and other drug-related deaths.
2. Research past students' deaths within their respective communities for the past 10 to 15 years that were tobacco, alcohol, and drug related.

Integration Into Physical Education

This would be a very good example of how the teacher could integrate the health content area: alcohol, tobacco, and other drugs into the discipline of physical education.

Have Students:

1. Discuss how alcohol, tobacco, and other drugs can inhibit and lower one's performance while playing sports.
2. Discuss concepts of relative risk and risk taking related to physical education.
3. Discuss short and long term consequences for taking anabolic steroids to include physical, social, emotional, and legal risks.

Appendix B-1

Risk Continuums Associated with Alcohol, Tobacco, Drugs & Addiction

Risk Continuum Activity

This activity is modified from: Gast, J., and Hodson, S. (2000). Teaching techniques for challenging individual risk perception. *Journal of Health Education*, 31, 244-246.

I have chosen the topic of Alcohol, Tobacco, Drugs & Addiction for purposes of this presentation.

Content Areas & Risk Continuums

Types of Risks



Functions of Risk Continuums

1. Reinforce content and knowledge of material.
2. Evaluate student's learning.
3. Create class discussion on variability in risk perceptions.
4. Assist students in thinking about concepts of risk as related to their own behaviors.
5. Help students brainstorm issues related to risks for health content areas.

Topic: Alcohol, Tobacco, Drugs & Addiction

1. Discuss concepts of relative risk and risk taking.
2. Give examples of helpful risks and harmful risks (some risks are health promoting and some risks are health prohibiting).
3. Discuss whether a risk varies when a behavior occurs only once versus a habitual behavior. Example: Does binge eating and purging once lead to negative health consequences associated with long-term bingeing and purging?
4. Draw the table below on the chalkboard. Have the students list the short- and long-term consequences of different types of risks such as physical, social, emotional, and legal.

Risks Associated With Alcohol, Tobacco, Drugs, & Addiction

Risks	Short-Term Consequences	Long-Term Consequences
Physical Risks		
Social Risks		
Emotional Risks		
Legal Risks		

Appendix B-2

Follow-Up Activity for Risk Continuums

It is suggested that the teacher get written consent from the school district & the parents to use this activity in the classroom; and to make certain that this activity is age- and grade-appropriate.

Risk Continuum Follow-Up Activity # 1

1. Divide class into two to three groups
2. Give groups a set of identical cards with specific behaviors on each card. Below are examples of behaviors that may be written on cards.
 - a. unprotected sex.
 - b. drinking while on a date.
 - c. everyone is “doing it”.
 - d. peer pressure to be initiated into a group.
 - e. sharing needles.
 - f. getting tattoos / body piercing.
 - g. abstinence.
 - h. I’ll only do this once, it can’t happen to me.
3. Have students form a line from the least risky behavior to the most risky behavior.
4. Have the groups stand across from each other to compare the order of their cards.
5. Discuss rationale and differences.

Risk Continuum Follow-Up Activity # 2

1. Divide class into two to three groups and ask the students to create a risk continuum by writing a source of information on a blank index card. Example: Source of health related information during a family life education unit.
2. Remind students that they should have sources that vary from very risky to not risky at all. Examples:
 - a. a risky source of information might be TV talk shows / advertisements: AIDS ads under fire from S.F. officials.
 - b. a safe source might be a health educator or health professional.
 - c. a controversial source of information might be a family member or a peer.
3. Have students present their continuums to the class & discuss whether students agree the order of their cards & why / why not

Conclusion

The teacher is able to evaluate learning by examining the accuracy of the content & whether risk perception is being accurately demonstrated. This can be an effective tool in presenting the topic of risk behaviors without the use of fear tactics.

Appendix C

Lesson Plan on Alcohol, Tobacco, & Drugs
 California State University, Chico
 By David Duffey, January 10, 2001

This lesson plan was reprinted for this article with permission from Mr. David Duffey. The lesson plan was a term project for HCSV 261 Health for Secondary Teachers.

Content Area

Alcohol, Tobacco, Drugs

Grade Level

12th Grade- can be adapted to lower grades if needed

Learning Objectives

By the end of this lesson, the student will be able to:

1. Match blood alcohol levels to effects on a worksheet.
2. Explain in a paragraph the two ways death can occur from alcohol overdose.

Content Outline

A. Alcohol Effect on the Body

Men									
Approximate Blood Alcohol Percentage									
Drinks	Body Weight in Pounds								
	100	120	140	160	180	200	220	240	
0	.00	.00	.00	.00	.00	.00	.00	.00	Only Safe Driving Limit
1	.04	.03	.03	.02	.02	.02	.02	.02	Impairment Begins
2	.08	.06	.05	.05	.04	.04	.03	.03	Driving Skills Significantly Affected
3	.11	.09	.08	.07	.06	.06	.05	.05	
4	.15	.12	.11	.09	.08	.08	.07	.06	
5	.19	.16	.13	.12	.11	.09	.09	.08	Possible Criminal Penalties
6	.23	.19	.16	.14	.13	.11	.10	.09	Legally Intoxicated Criminal Penalties
7	.26	.22	.19	.16	.15	.13	.12	.11	
8	.30	.25	.21	.19	.17	.15	.14	.13	
9	.34	.28	.24	.21	.19	.17	.15	.14	
10	.38	.31	.27	.23	.21	.19	.17	.16	
Subtract .01% for each 40 minutes of drinking. One drink is 1.25 oz. of 80 proof liquor, 12 oz. of beer, or 5 oz. of table wine									

Women											
Approximate Blood Alcohol Percentage											
Drinks	Body Weight in Pounds										
	90	100	120	140	160	180	200	220	240		
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	Only Safe Driving Limit
1	.05	.05	.04	.03	.03	.03	.02	.02	.02	.02	Impairment Begins
2	.10	.09	.08	.07	.06	.05	.05	.04	.04	.04	Driving Skills Significantly Affected
3	.15	.14	.11	.10	.09	.08	.07	.06	.06	.06	
4	.20	.18	.15	.13	.11	.10	.09	.08	.08	.08	
5	.25	.23	.19	.16	.14	.13	.11	.10	.09	.09	Possible Criminal Penalties
6	.30	.27	.23	.19	.17	.15	.14	.12	.11	.11	Legally Intoxicated Criminal Penalties
7	.35	.32	.27	.23	.20	.18	.16	.14	.13	.13	
8	.40	.36	.30	.26	.23	.20	.18	.17	.15	.15	
9	.45	.41	.34	.29	.26	.23	.20	.19	.17	.17	
10	.51	.45	.38	.32	.28	.25	.23	.21	.19	.19	
Subtract .01% for each 40 minutes of drinking. One drink is 1.25 oz. of 80 proof liquor, 12 oz. of beer, or 5 oz. of table wine											

From US DHHS, National Clearinghouse for Alcohol and Drug Information, Blood Alcohol Level Chart, URL: <http://www.health.org/nongovpubs/bac-chart/>

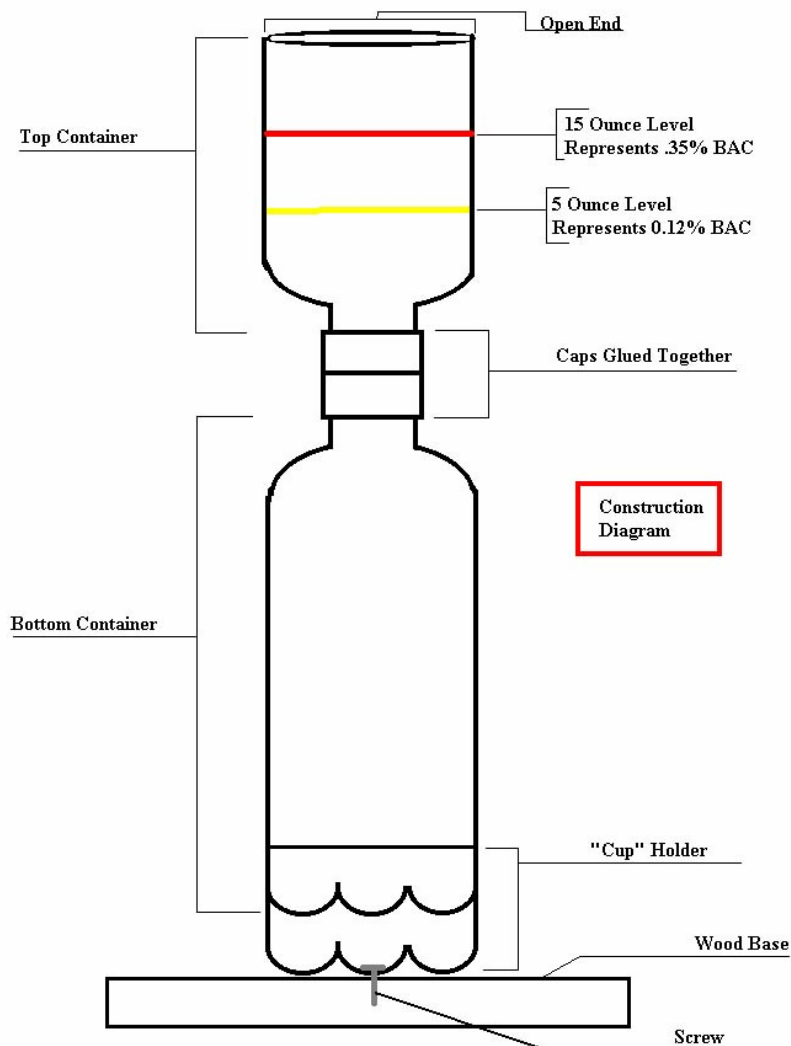
Materials

1. Four one-liter bottles (I used Safeway brand CLEAR™ sparkling water beverage because it has smooth sides and flat-topped cap).
2. One piece of wood, 1" X 6" X 6" for a base to hold the device stable (I found a piece of scrap wood, which is preferable, but if not available, a 1" X 12" X 12" piece can be purchased at the lumbar yard or hardware store for about \$3.00 or less).
3. One screw, 1/8 inch X 3/4 inch, coarse thread (or wood screw with a flat head).
4. JB Weld™ or other epoxy or modeling glue.
5. Two drill bits; one 1/16-inch diameter and one 3/16th-inch diameter.
6. Drill.
7. Clamp (optional).
8. One sheet 40 grit (coarse) sandpaper.
9. Measuring cup of one ounce "drink" container (a 35 mm film canister works well).
9. Razor cutter (or Exacto™ knife).
10. Sharpie™ fine point marker. For better visibility, I made two 1/8th inch strips on Microsoft Works® Spreadsheet, one yellow and one red and taped them to the bottle. Thin pin striping tape, available at most auto parts stores, would also increase visibility.

Materials: Product Replication Instructions

Roughen the tops of two caps with a sandpaper and glue them together, top-to-top, with the epoxy glue. Clamp them together and let the glue cure, follow instructions on the back (clamping gives extra strength but is not essential). After the glue has cured, drill a 1/16-inch hole through the center of both caps. The caps will connect the top and bottom bottles together and the hole will allow liquid (water) to drip from the top container into the lower container.

Using the razor cutter, cut the bottom off one of the liter bottles about three inches tall, this will act as a "cup" to hold the joined containers to the wooden base. Drill a 3/16th-inch pilot hole to ease screwing the cup onto the base, and attach the cup to the base with the screw. The bottom container, the second of four bottles, will fit into this cup and hold the two attached containers upright. The bottom container will remain intact except for a 1/16-inch hole drilled near the neck to equalize pressure. Cover the hole with cellophane tape and lightly puncture it with a straight pin, otherwise the liquid from the top container will drain too rapidly into the bottom one.



Drawing by David Duffy.

Appendix D
Every Minute
By Kurt Osterlund

The lesson plan was a term project for HCSV 261 Health for Secondary Teachers.

Content Area

Alcohol, Tobacco, and other Drugs

Grade Level

Middle School (6-7-8)

Learning Objectives

After two lessons on alcohol, tobacco, and drug abuse, the student will pass a comprehensive written exam with a score of 80% or better.

Content Outline

A. Alcohol

1. What is alcohol?
 - a. A depressant drug that is produced by a chemical reaction in some foods and has powerful effects on the body.
2. The way alcohol affects a young person.
 - a. Through the stomach and small intestines, alcohol passes quickly into the bloodstream (Merki, 1999).
 - b. Because alcohol is a depressant, it causes the brain and other parts of the body to work more slowly.
3. The body and the harmful effects of alcohol.
 - a. The way the brain works is slowed down by alcohol causing a person to have difficulty thinking.
 - b. Alcohol makes a person clumsy and slower to react in an emergency.
 - c. Blood vessels are widened and more blood flows to the surface of the body causing a person to lose body heat that can lead to a dangerous situation in very cold weather.
 - d. In the liver alcohol is changed into water and carbon dioxide, but excessive drinking over a long period of time can lead to cirrhosis which is the scarring and destruction of liver tissue.
 - e. Heavy drinking can lead to damage of the stomach and cause open sores.
 - f. Alcohol is physically addictive to humans of all ages (Kuntz, 1982).
4. Reasons why some young people drink.
 - a. Some teens drink to fit in with their friends (Merki, 1999).
 - b. Some teens want to try to appear grown up, but in fact young drinkers are more likely to act immature than mature.
 - c. Some young people use alcohol to escape from their problems, they think their emotional pain will go away, but instead it adds new problems to their lives.
5. How to help a friend.
 - a. Set a good example for your friend by not using alcohol.
 - b. Talk to your friend and come up with other ideas and activities that are fun without the use of alcohol.
 - c. Try and help your friend to get help through his parents, school, treatment centers and hospitals.

B. Tobacco

1. What is tobacco?
 - a. Tobacco smoke has over 3,000 chemicals in it and at least 43 of them are known to cause cancer (Merki, 1999).
 - b. Just a few of these chemicals are Nicotine, Tar, and Carbon monoxide.
2. The body and the harmful effects of tobacco products.
 - a. The skin wrinkles earlier in people that smoke (Merki, 1999).
 - b. Cigarette smoke causes bad breath and stains teeth, not to mention smoke can lead to mouth and throat cancer.
 - c. Tar in cigarette smoke coats the lining of the lungs, which besides not allowing the lungs to work properly can cause emphysema.
 - d. Nicotine increases the heart rate and causes the blood vessels to become narrower, which causes the heart to pump harder and can lead to a strained heart or heart attacks.
 - e. Long-term smoking can lead to stomach, bladder and colon cancer because of the harmful chemicals inhaled while smoking.
 - f. The nicotine in smoke is a stimulant that speeds up the way the body works and releases chemicals in the brain that causes a smoker to become addicted to the nicotine (Merki, 1999).
 - g. Carbon monoxide reduces the amount of oxygen in the blood stream starving organs of the needed oxygen supply.
 - h. Along with the same hazards of smoke, smokeless tobacco can cause tooth decay, gum damage, loss of the sense of taste and smell and is just as addictive in nature (Merki, 1999).
3. Reasons why young people use tobacco products.
 - a. Teens smoke because they want to fit in with their friends (Merki, 1999).
 - b. They want to seem older and more adult.
 - c. They believe smoking won't hurt their health for many years.
 - d. Teens are persuaded to smoke by advertising.
4. How to help a friend.
 - a. Try and do something other than smoking.
 - b. Tell your friend the hazards of smoking.
 - c. Read them the warning label on the cigarette package.
 - d. Bet them they can't quit.
 - e. Help them get help from the school or local community projects.

C. Drugs

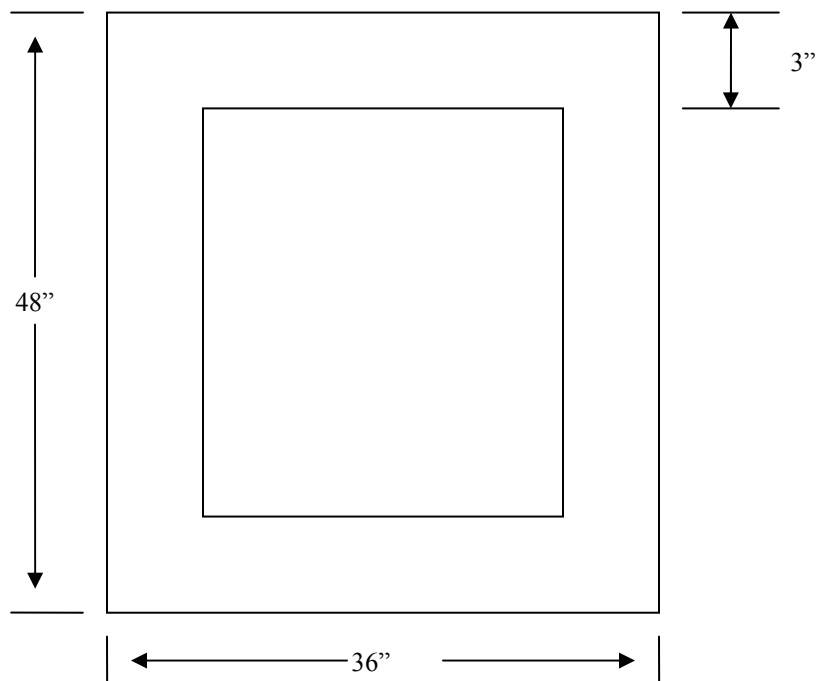
1. Types of drugs.
 - a. Drugs are a substance other than food that changes the structure or function of your body (Merki, 1999).
 - b. Medicines are either over-the-counter (OTC), these are considered safe without a prescription, or prescription style, which needs written orders of a doctor.
 - c. Illegal and harmful substances as cocaine, heroine and other illegal substances.
2. How medicines help the body.
 - a. Vaccines are preparations of dead and weakened germs that cause the immune system to produce antibodies, which keep us from getting certain diseases (Merki, 1999).
 - b. Antibodies are medicines that kill or stop the growth of certain germs that cause infections (Merki, 1999).
 - c. Some medicines treat heart and blood problems.
 - d. Some medicines reduce pain in the muscles, head, teeth, broken bones and other parts of the body.
3. The body and the effects of medicines.
 - a. Both prescription and OTC medicines can have powerful effects on the body (Merki, 1999).
 - b. Reaction to a medicine depends on many factors.

- 1) The type and amount of a drug.
- 2) The way it is administered.
- 3) Your weight, age and general health.
- 4) Other medicine and drugs that you are taking.
- 5) Allergies you may have.
- c. Negative reactions to medicines are any reaction to a medicine other than the one intended that might cause drowsiness, dizziness, rashes, upset stomach or death.
- d. Side effects may become dangerous when you have more than one drug in your body at the same time.
- e. Tolerance is when the body becomes use to the effects of a medicine and needs greater amounts of the medicine in order to work properly (Merki, 1999).
4. How medicines are administered to the body
 - a. Mucous membranes can have medicines applied directly in the eyes, nose or mouth by the use of sprays, ointments and creams (Merki, 1999).
 - b. Lotions and creams can be applied directly to the skin.
 - c. Medicines may be directly administered to the bloodstream through injections.
 - d. Inhalation through the nose and mouth is another way to administer medicine to the lungs.
 - e. Swallowing of a pill, powder or liquid moves medicines throughout the digestive system that can be absorbed throughout the body.
5. Medicine safety.
 - a. The United States Food and Drug Administration(Merki, 1999).
 - b. Labeling rules of both prescription and OTC medicines.
6. Misuse and abuse of medicines.
 - a. Misuse is the taking or using a drug not in the way the doctor ordered (Merki, 1999).
 - b. Abuse is using drugs in ways that are unhealthy or illegal.
 - c. What yourself for signs of misuse and abuse.
7. Why do young people misuse or abuse medicines?
 - a. Most teens do not know any better when they misuse medicines.
 - b. Remember that more is not better.
 - c. Use of drugs prescribed for someone else.
 - d. To relieve emotional and physical pain.
8. Help a friend.
 - a. Try to get your friend to stop using drugs.
 - b. Help them with their problem.
 - c. Seek professional help from the school, community or physician.

Materials: Product Replication

With the white cardboard, cut out the two holding squares (see below). These will be approximately four-foot by three-foot square with the center cut out leaving a three-inch border. On one write the name of a hospital near the school the children recognize and on the other write the name of a fictitious cemetery. These squares will be attached to the chalkboard with tape or appropriate fastening devices. On the three by five index cards, approximately 90 cards will be needed, write questions and answers to the related information that was discussed in class. Questions that are life threatening should be marked, for the instructor, with a letter X. These marked cards should be kept separate from the other question cards and should number approximately 30.

Holding Squares Dimensions



Set the two timers, one for one minute and the other for ten minutes. Starting at either side of the room, have the student answer the question from the top card in the stack that is not marked with an X. When the first timer goes off the student must answer the question, from the X marked cards, correctly or their name is placed in the hospital square. Reset the one-minute timer and proceed with the question and answer challenge, replicating the previous type of play. When the second timer goes off the student must answer an X marked card question correctly or their name is placed in the cemetery square. In order to leave the hospital the student needs to answer their next question correctly or their name is placed in the cemetery square. Students who are in the cemetery need to answer an X question card to go to the hospital. Students, in the hospital, can answer any question correctly to move out of the hospital square.

Materials

Two (4'x3') white cardboard squares

Erasable pens or chalk

Ninety 3" X 5" index cards with questions and answers written on one side

Thirty of the cards to be life threatening questions marked with an X

Felt pens and two ten-minute timers

References

Kuntz, J. R. M. (1992). Family medical guide. New York: Randon House, pp. 34.

Merki, M. B. (1999). Teen health. New York: Glenco/McGraw-Hill, pp. 222-223.

Integration Ideas

Integration Into the Health Curriculum

This game is easily integrated into Personal Health, Communicable & Chronic Disease, Environmental Health, and the Injury Prevention and Safety areas. As all of the above curriculum can be life threatening the use of the two holding squares are appropriate. The cards need to be changed in their question and answer format, to correspond with the different curriculum, with life threatening cards marked with an X.

Integration Into Other Disciplines

The integration of the game can also be integrated into other disciplines. For example the study of Political Science could have the holding squares labeled the Senate and the White House. The question and answer cards would then ask questions on bills, laws or political duties. Another example could be Economics where the holding squares could be labeled the Suburbs and Beverly Hills. Again the question cards would be rewritten to ask questions on the topic of economics and finance. The X cards could be questions that deal with major financial information a student needs to know for future economic and financial stability in life. The study of English could be played with holding squares labeled author and student while Geography holding squares could be labeled desert and paradise. The possibilities are endless for any course of study one would like to adapt the game. It only takes some imagination, the materials and the desired questions to ensure that the curriculum is covered during the game.