Alcohol--its use and abuse--is presented in this resource unit for grades four, five, and six. One of three units on alcohol, smoking, and drugs, this guide for teachers outlines information about the history of alcohol; types of alcohol and alcoholic beverages; physiological, psychological, and socio-economic effects of alcohol on people; and activities which will allow students to make intelligent decisions concerning the use of alcohol in everyday situations. A list of teaching aids and resources is also included. (BL)
Teaching Unit on Alcohol
Grades 4, 5, 6

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ALCOHOL EDUCATION
A RESOURCE UNIT GRADES 4, 5, 6

FORWARD

The abuse of the use of alcohol has created one of the four most serious health problems of today. Education can be a major force in the solution of the problem.

Although there are wide differences of opinion regarding the use of alcohol, present day mores seem to accept and support the practice of moderation. Each individual must make his own choice regarding the use of alcoholic beverages. The school can help students secure accurate information as a basis for making these decisions. The responsibility involves identifying facts regarding alcohol and developing the skills of reasoning and judgment essential to wise decisions and intelligent self-direction.

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ALCOHOL EDUCATION

OBJECTIVES:
1. To help students understand why people drink alcoholic beverages.
2. To make children aware of the types and uses of alcohol.
3. To present scientifically valid information to help children understand the physiological, psychological and socio-economic effects of alcohol on people.
4. To help students develop the ability to make intelligent decisions concerning the use of alcohol in everyday situations.

AREAS TO BE COVERED
1. Types of Alcohol
2. Use of Alcohol
3. Why People Drink Alcoholic Beverages
4. Behavioral Effects of Alcohol on the Drinker
HISTORY

In earliest times it was customary for man to draw his own blood; mingle it with anothers as a sign of trust and friendship. Later a cup of wine or other alcoholic beverage was used to seal agreements. This was called "aqua vitae" (water of life) and became identified with blood "the stream of life". This stream of life symbolism has given to alcoholic beverages a prestige which explains their wide acceptance down through the ages.

On sailing ships, RUM was issued after the difficult job of "splicing the mainbrace". In the Navy today an order to "splice the mainbrace" is reserved for special occasions.

At weddings, it has long been the custom to "toast the bride and groom". It is also a symbol of hospitality to offer a drink to a guest. Non-alcoholic beverages should be offered as an alternative to the non-alcoholic drinker.

History shows that people have tried to prevent intemperance.

In ancient Babylon (2225 BC) King Hammurabi set up the oldest known code with several sections devoted to problems created by the abuse of alcohol.

In China laws prohibiting wine making were enacted and repealed 41 times between 1100 BC and 1400 AD.

In North America prohibition laws were enacted in the 1920's accompanied by good and bad results. A reduction in per capita consumption and alcoholism on one hand, with a rise in lawlessness on the other.
TYPES OF ALCOHOL

A. Ethyl (grain) contained in alcoholic beverages.
   (beer, ale, brandy, whiskey, wine, rum, etc.)

B. Methyl (wood) alcohol.
   Industrial and medical applications. This is a poison if taken internally.

Ethyl alcohol
1. Used as a stimulant in our social structure.
2. Can be used in certain health measures.
3. Sometimes used as a psychological crutch.

Methyl alcohol
1. Industrial uses include: solvents, anti-freeze, varnishes, shoe polish, etc.
2. Medical uses: preservative for specimens, solvents for drugs, instrument sterilization, and rubbing alcohol.
3. There is extreme danger if taken internally.

THREE BASIC TYPES OF ALCOHOLIC BEVERAGES:

BEER
This is a broth made from cereal grains, allowed to ferment under controlled conditions. Brewed drinks have been known as far back as the Neolithic period.

WINE
This is produced by natural fermentation of grapes or other fruits.
In Italy, wine is taken chiefly at mealtime. Drunkenness is frowned upon as a sign of immaturity.

In France, wine is drunk throughout the day and abstinence is generally frowned on. Alcoholism is widespread.

SPIRITS

This is produced by distilling a fermented brew made from cereal grains, molasses or wine.

In North America hard drinking was part of the pioneer life. Today, when youth want to appear "grown-up" they call it "drinking like a man".

Alcohol boils at a lower temperature than water and vaporizes so when fermented brews (mostly alcohol and water) are heated, the alcohol vaporizes first. By passing this vapor through a cooking tube, it is changed back to a liquid that is about one-half alcohol. This is how SPIRITS are distilled.

DRINK CHART

Comparison in alcohol content:
1½ oz. whiskey = 3 oz. port or sherry wine = 12 oz. beer.

Alcohol needs no digesting. It is absorbed directly through the walls of the stomach and small intestine into the bloodstream.

Our bodies are made up of 2/3 water. Concentration of alcohol, and therefore, its effect, varies with the size of the person. Food in the stomach slows down absorption of alcohol and the rate of intoxication. Fatigue and emotional state may also contribute to the effect that alcohol consumption has on a person.
BEHAVIORAL EFFECTS OF ALCOHOL ON THE DRINKER

A. Relaxation
B. Feeling of well-being
C. Problem drinking and alcoholism

WHY MOST PEOPLE DRINK

A. Adults
   1. Social drinking for relaxation (physical or emotional)
   2. Doctor's advice

B. Youth
   1. Experimentation
   2. Status seeking
   3. Rebellion against authority
   4. "Kicks"

ALCOHOL AND ATHLETES

Banned by coaches:
   1. Because it results in lack of sleep.
   2. Excessive smoking usually accompanies an evening of drinking parties.

There is no evidence that drinking in moderation can cause harmful effects.

DANGER TO YOUTH

1. Uncontrolled behavior is the major hazard.
2. Accidents cause more deaths and disabilities than any disease.
3. About 1/4 of all auto accidents are due to "drinking and driving".
4. Produces false sense of security.
5. Dulls senses.
6. Results in poor judgment.

7. Inability to drive safely.
AVERAGE EFFECTS OF ALCOHOL

<table>
<thead>
<tr>
<th>Drinks</th>
<th>Effects</th>
<th>Blood-Alcohol Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2 drinks</td>
<td>1. Flushing of skin. 2. Inhibitions begin to disappear 3. Heart speeds up. 4. Gaiety</td>
<td>1/25 of 1%</td>
</tr>
<tr>
<td>5 drinks</td>
<td>1. Blurring of vision 2. Speech becomes fuzzy 3. Reaction time slows</td>
<td>1/10 of 1%</td>
</tr>
<tr>
<td>8 drinks</td>
<td>1. Staggering 2. Loss of balance 3. Double vision</td>
<td>4/25 of 1%</td>
</tr>
<tr>
<td>20 drinks</td>
<td>1. Skin becomes clammy 2. Pupils dilate 3. Unconsciousness (out like a light)</td>
<td>2/5 of 1%</td>
</tr>
<tr>
<td>26 drinks</td>
<td>DEATH due to alcohol</td>
<td>1/2 of 1%</td>
</tr>
</tbody>
</table>
EFFECTS OF ALCOHOL ON OTHER ORGANS OR BODY TISSUES

When alcohol is distributed throughout the body in the bloodstream, part of it (about 2%) is eliminated in the breath and in the urine. The rest must be burned in the body like fats, sugars and other foods.

Only the liver can burn alcohol and this at a fixed rate. This is the reason why alcohol is processed more slowly than other food-stuffs. Excessive drinking of alcoholic beverages can cause damaging effects on the liver.

ACUTE ALCOHOL POISONING

1. Makes the brain swell causing pressure inside the skull.
2. Impairs breathing function so oxygen in the blood is decreased.

FREQUENT AND LARGE INTAKE OF ALCOHOL

May affect the brain cells and cause sometimes irreversible damage.

LIVER

Fat accumulates rapidly in the liver and impairs its function. Eventually portions may die and be replaced by scar tissue. This condition is called cirrhosis of the liver.

HARM TO DIGESTIVE TRACT

Excessive drinking of straight liquor often produces inflammation of the stomach lining. This condition is called alcoholic gastritis. It can be painful and sometimes bleeding occurs.

DILUTED ALCOHOL:

1. Stimulates the formation of acid by the stomach.
2. There is no evidence that it causes stomach ulcers.
3. It may help, in some cases, to prevent ulcers by reducing tension.
ALCOHOL AS FOOD OR MEDICINE

1. Nutritionally it resembles pure fat or starch and supplies only calories.
2. If it replaces too much of normal diet, malnutrition may develop.
3. None of the essential vitamins, minerals or amino-acids are in alcohol.
4. Its medicinal value has been overrated in the past.
5. Today it is used in small amounts sometimes as a sedative and in some cases as a vascular dilator.

INTOXICATION - LENGTH OF TIME REQUIRED

1. Varies with people
2. Depends on how much the person has consumed.
3. Depends on the period of time over which the person has consumed the alcohol.

HANGOVER

1. This condition occurs 4 to 12 hours after peak of the blood-alcohol level has been passed.
2. Commercial airlines prohibit pilots from flying for 24 hours after drinking alcohol as a safety precaution.

LEGAL CONTROLS AND REGULATIONS ON ALCOHOLIC BEVERAGES

The 18th amendment was passed in 1919.
In 1932 beer was repealed; in 1933, spirits.
REASONS FOR 18TH AMENDMENT

1. People were abusing license privilege.
2. Breweries bought up the licenses.
3. Saloon keepers paid salary while brewery controlled place.
4. People were led to believe they could purchase alcoholics from drug stores if they would vote to approve 18th amendment. (This was not the case.)
5. W.C.T.U. had a strong propaganda machine; took advantage of the passage of "Women Suffrage" to get women to voice opposition to Saloons.
6. Main reason: Government lost money, had to enforce law, and had no revenue coming in from licenses.

OUTCOME

Today's places called Restaurant or Cafe, Cocktail Lounge etc. to overcome stigma of Saloon.
In New York State legal drinking age is 18 years.
Neighboring states legal drinking age is 21 years.
In a few states, beer is legal at 18 but not spirits.
If any law is to be effective the public must cooperate with law enforcement agencies. People make complaints but rarely prosecute. Families, Doctors, Lawyers cover up for children's misdeeds and won't permit them to suffer consequences of legal action. This encourages children in their lack of respect for law and authority.
ACTIVITIES

1. Research and discussion on two basic types of alcohol. (Ethyl and Methyl)
   A. Of what chemical elements is each composed?
      Other substances which include these elements.
   B. Differences and similarities between the two basic types of alcohol.
      Why is one safe to drink - the other poisonous?
   C. Discuss industrial and medicinal use of alcohol.

2. How does alcohol affect the body?
   Charts, graphs, diagrams, etc. which affect
   A. Appetite and nutrition
   B. Weight - gain or loss
   C. Nerve depressant
      (sedative in small amounts; anesthetic in large amounts)
   D. Brain activity; possible change in muscle coordination and speech.
   E. Central nervous system
   F. Body temperature
   G. Body resistance to colds; pneumonia and disease.
   H. Disease related to liver, kidney, heart, arteries.

3. Discuss the behavioral effects of drinking on
   A. Judgment
   B. Inhibitions
   C. Narcotic effects (Is alcohol a narcotic?)

4. DEBATE:
   Lowering the drinking age to 18 or raising it to 21
   Is it illegal or wrong for parents to serve alcohol to minors in their homes?
5. Make tables showing physiological effects of alcohol and tobacco on the body.
   A. Discuss similarities and differences
   B. Compare or contrast advertising

6. Research legal controls (Federal, State, Local)
   A. Legal drinking age
   B. Prohibition period
      1. Steps leading to passing of 18th amendment
      2. Why was it enforceable for all practical purposes?
      3. Repeal (21st Amendment)
   C. Bootlegging
   D. Federal and State controls on distilleries and breweries; protection against unlicensed and unregulated producers of alcohol.
   E. Traffic laws relating to drunk driving
   F. Why are there more Federal and State legal controls on alcohol than tobacco?
TEACHING AIDS

1. "Thinking about Drinking" (free)
   Room G024 H.E.W. South, 330 C Street N.W., Washington D.C.

2. Teachers Kit
   6 pamphlets and 3 booklets; Teacher's Guide 75c
   Publicity Division, National Council on Alcoholism Inc.
   2 Park Avenue, New York, New York 10016

3. AMA 535 N. Dearborn Street, Chicago, Illinois 60610

4. Rutgers University Center of Alcoholic Studies
   New Brunswick, New Jersey 08903

5. National Safety Council 425 North Michigan Avenue, Chicago,
   Illinois 60601

6. Alcohol and Drug Addiction Research Foundation of Ontario
   24 Ha-bord Street, Ontario 5, Canada