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Nicotine Addiction to Disease: Growing Up With the Tobacco Industry

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Almost all people try smoking at least once. Some never again, others will continue for only a short time. However, many people continue to smoke and become seriously addicted to the active drug in tobacco . . . nicotine.

The effects of smoking on an individual can be devastating. Tobacco contains carcinogenic and toxic substances which cause heart disease, emphysema and several types of cancer. These illnesses lead to the deaths of 300 thousand Americans each year, approximately the same number died in four years of World War Two.

Public health economists estimate the costs of smoking on society to be at least 65 billion dollars each year in lost productivity and health care expenditures. This would mean that every pack of cigarettes sold in the United States costs the economy \$2.17.

Yet the tobacco growers and cigarette manufacturers are making billions of dollars each year selling this deadly and addictive drug. They epitomize the statement: "Business is war," and they are fighting this war collectively through the Tobacco Institute, a powerful tobacco lobbying organization. In this war, the tobacco companies are fighting on every front. In congress and courtrooms they are battling product-liability suits, warning labels, no-smoking laws, excise taxes, and health studies which continue to prove that smoking causes addiction and death.

Tobacco is a unique industry, for they are selling death. Cigarettes are the most deadly product on the market. Like weapons, if used as they are intended to be used, will cause injury and death. Yet smoking tobacco is an intrinsic part of American culture and history. It is the hope of many that all people will choose not to smoke, and yet smoking is as American as apple pie. The first people to use tobacco were Native Americans, who made it an important aspect of their culture also.

The tragedy is that all the suffering and loss caused by smoking is preventable. If people did not smoke, they would live longer and healthier lives. They would not be addicted to this harmful drug, which poisons the body and ruins lives. This unit will concentrate on tobacco, and the hazards of smoking. The purpose for writing this unit is to raise the level of awareness about the tobacco industry and the dangers of smoking.

The unit will address the history of tobacco, the tobacco industry, smoking risks and related illnesses, and

tobacco use in modern American society.

The unit will be written to address the needs of children in grades four through six (4-6). The unit will include pre and post tests, vocabulary, guest speakers, a smoking survey, lesson plans, teacher and student resources and a bibliography.

The goal of this unit is to empower children with knowledge about tobacco and smoking related illnesses. I want to help them make the right choice . . . choosing never to become “a smoker.”

HISTORY

The written history of tobacco and Americans begins October 12, 1492, when Christopher Columbus reached the beaches of San Salvador in the West Indies. From the first meeting between Europeans and Americans, it was obvious how important tobacco was in American culture. Columbus wrote in his journal how they offered his Spanish sailors fruit, spears, and “certain dried leaves” for which Columbus could think of no use. So Columbus and his crew welcomed the fruit and spears; the dried leaves they threw away.

Three days later, Columbus met a solitary Native American in a canoe, he also offered the dried leaves, and made a great show of his offering. No doubt the Europeans wondered why the dried leaves were so highly valued.

The following month, two sailors, Rodrigo de Jerez and Luis de Torres were sent on a three day expedition across Cuba. They reported how the Natives wrapped tobacco in “a musket formed of paper,” and after lighting one end inhaled smoke through the other. Jerez and Torres became the first Europeans to smoke tobacco. Rodrigo de Jerez became a confirmed tobacco smoker; probably the first European to become addicted to nicotine.

Later voyages would discover the importance of tobacco in Native American cultures. Tobacco was used by Native Americans in all temperate regions of the Americas. In some areas where it could not be grown, people made long voyages to trade skins for tobacco. It was used only by males as a social drug, much as it is by people today. But tobacco was also used for medicinal and spiritual purposes by most Native American tribes.

Long before the Europeans were rediscovering America, Native Americans were using tobacco in all its forms. Cigarette, snuff, cigar and chewing tobaccos were all being used for hundreds of years before Columbus’ arrival. But smoking tobacco through a pipe was almost universal for Native Americans. Just about every Native American culture in the Americas had a “pipe” of some kind, and it was the most common method for smoking. It was from the West Indian snuffing pipe called a “tobago” that tobacco got its name.

There were two species of tobacco cultivated and most preferred by Native Americans. *Nicotiana rustica* from North and Central America, is somewhat bitter, and was smoked through a pipe. And *Nicotiana tobaccum* from Central and South America and the West Indies, is mild enough to be smoked as a cigar or cigarette. They would also smoke wild tobaccos called *Nicotiana petunoides*, which are very harsh, but were used in the absence of the cultivated tobacco species.

From the beginning, Europeans and Native Americans most preferred smoking the South American *Nicotiana tobaccum* over all other tobaccos. The Spanish and Portuguese were the first European countries to set up

tobacco settlements in the New World. The settlements were established in Central and South America to grow the *Nicotiana tobaccum* to be exported to Europe. The addiction would soon spread to France and England, and the rest of the world.

The first English tobacco colony was set up at Jamestown in Virginia. John Rolfe first introduced the South American *Nicotiana tobaccum* into North America on his plantation at Jamestown in 1612. It would be a great success. *Nicotiana tobaccum* would soon become the most favored tobacco by people all over the world. It is the only tobacco cultivated and marketed in the world today.

John Rolfe grew tobacco as a cash crop for British consumption, and it was very profitable. But the people at Jamestown didn't grow enough food crops to feed themselves through the winter. So John Rolfe and the Jamestown Marshal Thomas Dale, Kidnapped Pocahontas, the daughter of the Algonquin Chief Powhatan. They demanded that Powhatan pay a ransom of foods for his daughter's safety. Powhatan paid, but Rolfe and Dale then increased the ransom. While being held captive, Pocahontas was forced to accept a Christian baptism, along with the name Rebecca. She was then forced to marry John Rolfe, even though she was already married to one of her own people. In this way the ransom became an annual dowry, the Algonquins paid faithfully, and the English continued to grow their primary cash crop, tobacco. This would end nine years later with the death of Pocahontas. Her uncle Chief Opechancano attacked Jamestown in 1623 and killed 349 out of the 1200 colonists. But the British-American tobacco industry was growing, and nothing would slow European tobacco consumption.

The story of Pocahontas, in its fictional form, has been read by millions of elementary school children. It is a romantic story of a beautiful Native American woman who falls in love with an English settler at Jamestown. The true story is much sadder. John Rolfe used her as a pawn for his tobacco enterprise. He even brought her to live in England where she could help market his exotic new product, *Nicotiana Tobaccum*. He was a complete success. In the four centuries since, millions of English people would become addicted to smoking, and die from smoking related illnesses. And his *Nicotiana Tobaccum* is being cultivated and smoked in every region on Earth. John Rolfe is the model for tobacco industry success; stop at nothing, get them addicted, and make money! John Rolfe may not have known about nicotine addiction, heart disease and lung cancer, but he was the first tobacco industry businessman to so relentlessly push its product. There have been many to follow in his footsteps.

Tobacco plantations grew in number all over the Americas, and they even tried to grow *Nicotiana tobaccum* in Europe, but not with as much success as in the Americas. Tobacco plantations were built in Virginia, Maryland and the Carolinas. The labor to run the plantations could not be Native, for they refused to work for most settlements. So a system of indentured servitude was created. Under this system, a man could earn his passage to the Americas by working on a plantation for a number of years, usually seven. But indentured servants were only temporary, and were soon replaced by African slaves as the chief form of labor on American tobacco plantations.

For hundreds of years, most people used tobacco in cigar pipe, chew and snuff forms. Cigarettes were a little more difficult, for to smoke them you had to keep a pouch and roll your own. In the 1870's, tobacco businessman Bill Taylor began using immigrants in his factories as rollers. He began to market ready to smoke boxes of tobacco cigarettes.

In 1881, James Albert Bonsack invented the first economically practical cigarette rolling machine. His machine produced 120,000 rolled cigarettes a day, equivalent to the output of 50 expert rollers working 13 hours. This was the beginning of the tobacco industry we know today. The invention of the rolling machine made tobacco

much more accessible to the masses, and made smoking an easier habit to manage.

This new technology allowed James Buchanan Duke to create a cigarette monopoly equal to Rockefeller's in petroleum and Carnegie's in steel. Duke tied Bonsack to a series of unbreakable contracts guaranteeing that Bonsack could sell his machines to competitors, but the royalties Duke paid would always be 25 percent less. James Duke began mass producing and marketing cigarettes. He expanded advertising and made cigarettes affordable and readily available to American consumers. Through price cutting he managed to subdue all his competitors, and Duke controlled a tobacco trust in the United States.

The trust soon turned on tobacco farmers and forced them to sell tobacco for three cents per pound, two thirds less than they were getting before Duke's monopoly. But the tobacco growers formed farmer associations and fought back. In 1911, the U.S. Supreme Court ruled the existence of Duke's monopoly in violation of the Sherman Antitrust Act. The Supreme Court forced the Duke family to break up the monopoly. From this antitrust break up emerged R. J. Reynolds, Lorillard, Liggett and Myers, and the American Tobacco Company. These companies, along with Philip Morris Inc, comprise 95 percent of the American tobacco market today.

The cigarette fits our fast paced life style. They are a fast, convenient nicotine fix. By 1921, cigarettes had become the leading form of tobacco consumption in the world. Cigarettes fit our life style, and therefore we can more easily manage this habit, getting the nicotine we crave, when we crave it. But in the 1950's, a time when tobacco consumption had peaked at nearly 50 percent of the adult population smoking, it was proven that tobacco causes lung cancer. This discouraged many people from smoking, but the tobacco industry responded with filtered cigarettes, and people continue to smoke.

THE MODERN AMERICAN TOBACCO INDUSTRY

Science has proved beyond all reasonable doubt that cigarettes cause addiction, disease and death. Nicotine is more addictive than heroin and causes the deaths of 350,000 Americans each year. The use of tobacco, once commonplace in American culture, is now disliked by most Americans. Nonsmokers are now aware of the harms caused by passive smoking, and many restrictions on where people can smoke have been implemented. Even regular smokers most often wish they could stop smoking. If not for nicotine addiction, tobacco wouldn't be a profitable business. Young people would still experience smoking for a short time, but when the experiment was over most would quit this expensive, deadly habit. Tobacco is no longer a socially accepted form of behavior in American society. We tolerate tobacco use because it has been with us for a long time, but we would not wish for our children and loved ones to become regular smokers.

It seems the only people who approve of and encourage smoking are those involved with the tobacco industry. For cigarette companies to maintain their sales, they must recruit 2.2 million new smokers each year. But there is little incentive for mature adults to begin smoking. So cigarette advertising is aimed to recruit teenagers. The romance and adventure of Marlboro Country is the appearance teens want to show. They see Joe Camel as a "cool" character who lives on the edge. Most teens begin smoking because adults smoke, or their friends smoke. Everyday, 3 thousand children become regular smokers and 1 thousand of these children will die of smoking related illnesses.

In recent years the tobacco industry has been under increased scrutiny and attacks. Many tobacco users have

filed civil suits against manufacturers for tobacco-related illnesses to themselves and family members.

In July of 1996, Connecticut filed a 1 billion dollar lawsuit against the nation's tobacco industry. State Attorney General Richard Blumenthal claims tobacco-related illnesses cause 5,000 deaths every year in the state, and a financial burden of 100 million dollars to treat these illnesses each year.

Connecticut is one of ten states seeking damages against the tobacco industry. The other states are Florida, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Texas, Washington, and West Virginia. Many other states are expected to file similar civil suits in the future.

In 1965, Congress ordered all cigarette manufacturers to put health warnings from the U.S. Surgeon General on all packages of cigarettes sold the United States. At first the industry tried to fight congress, but they finally agreed, and even helped write the consumer warnings. As a result the tobacco industry has never lost a product liability civil suit. They point out to the courts and consumers, "you were warned of the dangers".

The tobacco industry is under a constant siege of attacks by politicians, the F.D.A., the media, scientists, and society at large. But tobacco is a 30 billion dollar a year business with a long history of political power. The tobacco industry is not going to stop this business of death voluntarily.

The use of tobacco can only be reduced through government intervention. Banning tobacco advertisements and raising taxes on tobacco products have proven to be very effective economic reducers of tobacco consumption. Education programs to inform the public about the dangers of smoking have also proven extremely effective. The state of California had one such program called proposition 99. It called for an additional 25 cent tax on cigarettes, and the money was used to fund anti-smoking TV ads which informed the public on the dangers of smoking. As a result of proposition 99, cigarette smoking was "denormalized" in California, where smoking was reduced by 44 percent.

The tobacco industry responded to proposition 99 with a huge lobby in the state legislature. The lobby gave Governor Wilson, then Speaker of the House Larry Brown, and members of the state legislature, millions of dollars in campaign contributions. Wilson is still Governor, and Larry Brown is now the mayor of San Francisco. In return the tobacco industry got rid to the public education component of proposition 99. And use of tobacco in California is again rising. But proposition 99 proved that society can reduce its number of smokers through tax and education. Programs like proposition 99 will be fought by the tobacco industry on every front, but we must pressure our law makers to put the health of Americans first and the interests of the tobacco industry last.

SMOKING RELATED ILLNESSES

Lung Cancer

Lung cancer is the uncontrolled growth of abnormal cells in the lung. Cancer develops when normal cells become abnormal, and grow out of control. People often wonder, "what causes lung cancer?" Scientific research says that smoking is the major cause of lung cancer. A small amount of patients who have the disease have never smoked. That is because you can also get lung cancer if your exposed to asbestos for a long period of time. Also miners who work with radio active machines have also been at risk to get the

disease.

On an average, men and women between the ages of fifty and seventy who have smoked most of their lives are usually the ones to get lung cancer. It is also the number 1 cause of cancer deaths. There are 177,000 new cases of lung cancer in 1996. There have already been an estimated 158,700 deaths this year. More than 350,000 Americans die of lung cancer each year. World wide, 5 million people die of lung cancer each year. Since 1987, more women have died each year from lung cancer than any other cancer including breast cancer.

Emphysema and Bronchitis

Lung tissue is very flexible and delicate. It is important for oxygen to pass through the bloodstream. When emphysema occurs the lung loses its elasticity like a rubber band that won't snap back. The two diseases (emphysema and chronic bronchitis) have been lumped together under the name Chronic Obstructive Pulmonary Disease. People who begin suffering from many of the chest problems that occur from these diseases wonder which of the two diseases they have. The fact is that the chances are good that they may have both to some degree.

Most people start smoking in their early teens. After a few years they may notice that their breathing is becoming slower and weaker. They may also notice they get a lot more colds than people who don't smoke. The reason is that the cold goes right into the chest, and lingers there. Then they are left with a bad cough that won't go away. Some call it a "smokers cough", others may say a "cigarette cough".

A person suffering from emphysema and/or chronic bronchitis begins to feel tired more often. Climbing up stairs seems to feel like a big task. Any type of fast movement such as: cooking, cleaning, walking, etc. causes breathlessness, and usually follows with severe chest pains. When these diseases progress, severe infections such as pneumonia occur. At this time they become confused, and have bad headaches. This is when therapy or even hospitalization is necessary. Some people take well to the treatments, which means they have a chance if they stop smoking.

Smoking and Heart Disease

Cigarette smoking is the number one cause associated with heart attacks in the United States. The connection between cigarettes and heart disease (also cancer) is so great, that the Surgeon General of the United States instructed that there has to be a warning against the dangers of smoking printed on every package of cigarettes.

Cigarette smoking speeds the development of heart disease and lessens the capacity of blood flow. This is what triggers a heart attack. Many studies have shown that smoking cigarettes is very dangerous for people that have already had a heart attack or if they are prone to. Cigarettes cause more heart disease and lung cancer than other forms of tobacco, because cigarettes are inhaled much more often.

It is very important for someone who has inherited a tendency to have high blood pressure to control their risks by changing habits and making life-style adjustments. Smoking cigarettes is a major cause of heart attacks and heart disease deaths. If a person wants to lessen their chances of having a heart attack or getting heart disease, the answer is to never start smoking.

Time Line of Historical Events

- 1492 Columbus reaches the West Indies finds Native Americans smoking tobacco.
- 1492 Rodrigo de Jerez becomes the first European to smoke tobacco. He became a habitual tobacco smoker.
- 1548 Portugese cultivate tobacco in Brazil for European consumption.
- 1564 Sir John Hawkins introduces pipe smoking to English nobles.
- 1612 John Rolfe cultivates South American Nicotiana tobaccum in North America at the English colony Jamestown.
- 1676 Heavy taxes put on tobacco by Virginia colony Governor Berkeley lead to Bacon's Rebellion, a foretaste for the American Revolution.
- 1865 Immagrants brought to Southeastern United States to roll 70 cigarettes.
- 1881 James Albert Bonsack revolutionizes tobacco industry with the invention of a rolling machine. The machine rolled 120,000 cigarettes per day.
- 1911 The United States Supreme Court rules the American Tobacco Company a monopoly in violation of the Sherman Anti-Trust Act.
- 1921 Cigarette becomes the leading form of tobacco consumption.
- 1953 Epidemiological studies released indicated that smoking killed people by causing cancers and cardiovascular diseases.
- 1959 Filtered cigarettes leads consumption of all tobacco products.
- 1965 Warning labels were mandated on all cigarette boxes by congress.
- 1994 Chief Executive Officers in American tobacco industry deny nicotine is an addictive substance.

Vocabulary List

addiction: the forming of a dependence on a drug.

bronchitis: the inability to clear the lungs and air passages of phlegm, leading to infection and breathlessness.

carbon monoxide: a poisonous gas contained in cigarettes, which hinders the release of oxygen into the body.

emphysema: a disease that breaks down the walls of the air sacs throughout the lungs and makes it difficult to breathe.

lung cancer: the uncontrolled growth of abnormal cells in the lung.

heart disease: a disease of the circulatory system in which veins and arteries become hardened with plaque leading to high blood pressure or a heart attack.

passive smoking: The inhalation of smoke from cigarettes smoked by other people.

Tobacco Institute: a lobby organization which is designed to pursue the political and economic interests of the tobacco industry.

Nicotine: An active drug in tobacco which causes smokers to be addicted.

Surgeon General: the chief American medical officer for health.

Lesson Plan 1

Objective *The students will learn the origins of tobacco and how its use spread from the Americas throughout the world.*

Materials *Student activity maps, large world map, globes, crayons, reference materials (see bibliography).*

Discuss *Ask the children if they know people who smoke cigarettes, pipes, or cigars. Then ask if they know who were the first people to smoke tobacco. Discuss how tobacco was first used by Native Americans. Explain how Christopher Columbus brought tobacco back to Spain, and its use spread throughout Europe and the rest of the world.*

Activities

1. Have students touch, see, and feel tobacco leaves and pass them around the room. This demonstrates how tobacco use spread throughout the world. Explain that tobacco contains nicotine which is an addictive drug. When people begin using it regularly, its use is difficult to stop.
2. Using a large map of the world, explain Columbus' voyage of the Atlantic Ocean from Spain to the West Indies, and around the Gulf of Mexico. Tell the students how it was surprising for Christopher Columbus and his sailors to see the Native Americans smoke tobacco.
3. Have students label and color world maps.

Lesson Plan 2

Objective The students will learn how cigarette manufacturers mislead and deceive consumers into thinking cigarettes are "cool". The students will create Anti-smoking advertisements (Posters and Billboards) which demonstrate the harm caused by smoking.

Materials Magazine advertisements, newspaper advertisements, photographs of billboards, construction paper, old magazines, art supplies.

Discuss

1. Pass out newspaper and cigarette advertisements, (40-50 clippings) and have the students look for feelings expressed by models and slogans advertising the products to consumers.
2. Then have the whole class discuss and brainstorm the cigarette manufacturers' message about smoking.
3. Based on prior knowledge, have the students brainstorm slogans and feelings they would put into Anti-smoking advertisements.

Activities Making Anti-smoking billboards, posters, and collages.

1. Using old magazines, have the students clip photos of solemn, sad, fearful or angry faces for their anti-smoking advertisements.
2. Paste or draw pictures on construction paper, and have the students write anti-smoking slogan statements to put in their projects.

Lesson Plan 3

Objective The students will learn how to gather information through conducting a survey.

The students will graph the information gathered through surveying smokers and non-smokers.

The students will gain insights about smoking from smokers and non-smokers.

Materials Surveys for smokers and non-smokers.

Discuss Though people are smoking less in the 1990's than in the past, one million teenagers begin smoking each year, and some never quit. It is important for children to discover first hand why people smoke, and how they began smoking.

Activity

1. The students are to use the surveys for smokers and non-smokers, and to gather as much information as possible.
2. After the surveys are completed, the students should graph and discuss the information gathered.
3. Teachers may also want to have the students write their own survey questions rather than using the surveys provided.

Non-Smokers Survey

1. Have you ever tried smoking even once?
2. Have you ever been a regular smoker?
3. Rank the following reasons for not smoking:
 - causes bad breath
 - habit too costly \$
 - Related illnesses; such as heart disease and lung cancer
 - fear of becoming addicted to nicotine
4. Do you think we need stronger regulations or higher taxes on tobacco products?
5. Do you think people should have the right to smoke cigarettes?
6. Do you dislike second-hand smoke?
7. Do you feel second-hand smoke is harming your health?

Smokers Survey

1. At what age did you begin smoking?
2. Why did you start smoking?
3. How many cigarettes do you smoke each day?
4. How much money do you spend on cigarettes per day?
5. Do you fear contracting smoking related illnesses such as lung cancer or heart disease?
6. Would you like to quit smoking?
7. Have you ever tried to quit smoking?
If yes, about how many times have you tried to quit?
8. Do you believe cigarettes to be addictive?
9. Do you think we need stonger regulations or higher taxes on tobacco products?
10. Do you think people should have the right to smoke cigarettes?

Cross Curricular Activities

1. Writing (Essay)

Essay Prompt: You are the President of the United States. Write a bill banning the sale of tobacco products. Include health and economic reasons why society should be free of tobacco use.

Alternative Prompt:

You are president of the United States.

Write a proposal to eliminate already existing restrictions on the marketing and sale of tobacco. Include reasons why age laws, advertisement restrictions, taxes, etc. should be eliminated from tobacco products.

2. Writing (Surgeon General Warning)

Expose students to the four warnings used on cigarette packages, and assign them to write stronger warnings for cigarettes.

Cigarette manufactures are required to put one of the following Surgeon General warnings on cigarette packages:

A. Cigarette smoke contains carbon monoxide.

B. Quitting smoking now greatly reduces serious risks to your health.

C Smoking by pregnant women may result in fetal injury, premature birth, and low birth weight.

D. Smoking causes Lung Cancer, Heart Disease, Emphysema, and may complicate pregnancy.

* Have the stronger warnings include words such as: Death, Cancer, Addiction, Disease, Etc.

3. Persuasive Writing (Please Don't Smoke)

Have the students write persuasive letters to smokers they know. The letters should try to convince smokers to quit smoking. If the children don't know any smokers, the alternative letter writing assignment is for them to convince a non-smoking friend or family member never to begin smoking.

4. Persuasive Letter Writing

Have the students write their congress person and United States senator expressing their views on smoking and the tobacco industry. This should be written in the form of a business letter. The students may also ask for relative view points the politicians may have concerning these issues.

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Gower Publishing Ltd. 1991.

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Cancer Risk Report: Prevention and Control, The American Cancer Society, Atlanta, Ga. 1994.

Other Resources Available

American Cancer Society

1599 Clifton Road NE

Atlanta, CA 30329

American Heart Association

7320 Greenville Avenue

Dallas, TX 75231

American Lung Association

1740 Broadway

New York, NY 10019

Center for Science in the Public Interest

1501 16th Street NW

Washington DC 20036

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