Rationale
All forms of tobacco and tobacco-related products are harmful to the body. Adolescents who understand the negative short-term effects, long-term effects, and social consequences of using tobacco products are more likely to remain tobacco free.

Objectives
Following this lesson, the student will be able to:

• Identify the various types of tobacco and nicotine products
• Identify the chemical makeup of tobacco products
• Analyze the social consequences of nicotine use
• Describe the harmful short-term and long-term effects of nicotine use, including secondhand smoke, on the body

Activities
1. The Nicotine Report .......................................................... 10 minutes
2. Clearing the Air ................................................................. 15 minutes
3. Media Spin .......................................................................... 5 minutes
4. Toxic Concentration .......................................................... 20 minutes

Before You Start
• Distribute the Student Workbooks at the beginning of the lesson.
• Make a copy of the Tobacco Product Category Cards on a different color card stock for each group.
• Review the Toxic Concentration Game Materials, lesson script on Teacher’s Manual pages 120-122, Student Workbook page 17, and Game Instructions on page 128.
• To reinforce the skills taught in this lesson, prepare journal activities or lesson extenders from the Looking for More? section to assign at the beginning or end of your classes throughout the week.
• Make a copy of Home Workout 7 for each student. Distribute at the end of the lesson.

Materials
To deliver this lesson, you will need:

• Student Workbook pages 16-17
• Toxic Concentration Memory Cards and Quest Cards (in your kit)
• Home Workout 7, Teacher’s Manual page 124
• Tobacco Product Category Cards, Teacher’s Manual pages 125-127
• Toxic Concentration Game Instructions, Teacher’s Manual page 128
1. The Nicotine Report

In our last lesson, we talked about addiction. We identified the stages of addiction and their associated behaviors and consequences. We concluded that it is easier to never start using an addictive substance than it is to quit.

We also talked about healthy ways to manage common pressures without turning to drug use. Turn to page 16 in your workbooks. If someone wanted to take a risk, what are some healthy alternatives? Perform for an audience, get a new hairstyle, ride a roller coaster, etc. What are some healthy ways to fit in and belong? Join a club, play on a team, volunteer, etc.

Today we’re going to talk about a drug that contains a highly addictive chemical. This drug comes in many forms. Whether it is smoked, dipped, chewed, or vaporized, it affects the healthy development of the teenage brain and body. What drug are we talking about? Tobacco. That’s right; tobacco. What is the highly addictive chemical in tobacco products? Nicotine.

Tobacco products contain thousands of carcinogens, including toxic metals, chemicals, and poisonous gases. Who can tell me what carcinogenic means? Known to cause cancer. That’s right; tobacco products are known to cause cancer.

Tobacco products fall into three categories. They are Smoked Tobacco Products, Smokeless Tobacco Products, and Electronic Nicotine Delivery Systems or ENDS. Write the category headings on the board providing space to list the tobacco products in each category.

Cigarettes are Smoked Tobacco Products. Write cigarettes on the board under Smoked Tobacco Products. What are some other smoked tobacco products? Cigars, pipe tobacco, hookah tobacco. Write cigars, pipe tobacco, and hookah tobacco on the board under the Smoked Tobacco Category.

Dip and chewing tobacco are Smokeless Tobacco Products. Write dip and chew under that category.
ENDS heat a liquid containing a concentration of nicotine forming an aerosol that is inhaled. The nicotine oil often contains varying compositions of flavoring. ENDS products include e-cigarettes, vape pens, vaporizers, and hookah pens. Write e-cigarettes, vape pens, vaporizers, and hookah pens on the board...

If the students ask for more information about the various tobacco products, share the information provided here. However, it is not necessary to review each product.

Cigarettes are made from finely chopped tobacco cured with chemical additives to preserve the tobacco. The tobacco is rolled in paper and often fitted with a filter to make the smoke more palatable. The filter does not remove the chemicals or tar produced by the burned tobacco.

Cigars are made from rolled cured tobacco leaves. Cigars are stronger than cigarettes. A single cigar can contain as much nicotine as a pack of cigarettes. Cigar smoke contains the same chemicals and carcinogens that are in cigarette smoke.

Pipe tobacco is roughly ground and cured. Pipe tobacco is often flavored with apple, cherry, or cinnamon flavorings. Pipe smoke contains many of the same chemicals and carcinogens that are in cigarette smoke including nicotine.

Chewing tobacco is usually made from lower quality tobacco leaves including those damaged by insects. Chewing tobacco is cured and contains nicotine and other chemicals some of which are carcinogens.

Dip is a smokeless tobacco product made of a fine powder of cured ground tobacco leaves and stems. Dip is typically flavored to mask its strong, bitter taste.

Electronic Nicotine Delivery Systems (e-cigs, vape pens, hookah pen, e-pipes, etc.) use a liquid that may contain nicotine, as well as varying compositions of flavoring. The liquid is heated to form an aerosol that is inhaled. Some ENDS are manufactured to look like cigarettes, cigars, or pipes. Others resemble pens, highlighters, or other everyday items.

Hookah tobacco, also known as water pipe tobacco, is burned in a hookah (water pipe) and inhaled. Hookah smoke contains many of the same chemicals and carcinogens that are in cigarette smoke including nicotine.

Teaching Tip
The FDA considers all electronic nicotine delivery systems, including vaporizers, vape pens, hookah pens, and electronic cigarettes to be tobacco products. This allows the FDA to regulate these products.

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Sample
2. Clearing the Air

All tobacco products are harmful, but not everyone is aware of what’s in them that makes them so harmful. Let’s see what you know about tobacco products and their ingredients.

I am going to put you into groups to examine the makeup of these products. Each group will receive a set of Tobacco Product Category Cards like these… *Hold up the Tobacco Product Category Cards.*

I will read several descriptions to you, and your group will determine the category of tobacco products fits the description. When I say, “Reveal your answers,” display the category or categories that represent the answer. It might be one, two, or all three categories. Keep the cards face down on your desk until it is time to answer.

*Put the students into groups. Distribute a single-color set of Tobacco Product Category Cards to each group.*

Let’s try one together…

1. Arsenic, the poisonous carcinogen typically used in rat poison, is found in these tobacco products.

*Discuss the answer with your group.* *Allow time for the students to discuss their answers.*

*Reveal your answers.* *Student groups should display all three tobacco product cards.* *Smoked Tobacco, Smokeless Tobacco, and ENDS.*

All three types of tobacco products contain arsenic. Let’s continue the activity.

2. The heating or burning of these tobacco products produces high levels of carbon monoxide and other cancer causing chemicals. *Smoked Tobacco Products and ENDS.*
Lesson 7 A Toxic Waste - *Effects of Nicotine Use*

People often think that only the smoke from smoked tobacco products is harmful, but the heating of the liquid in Electronic Nicotine Delivery Systems produces carcinogens too.

3. This type of tobacco product is often promoted as a remedy to quit smoking but is not an FDA-approved remedy for quitting a nicotine addiction. 🚭 ENDS.

While ENDS are often marketed as a means to quit nicotine use, evidence suggests that ENDS are not an effective smoking cessation remedy. In fact, a recent study reported almost 60% of ENDS users, with more than 30 days of use, still use regular cigarettes in addition to ENDS.

4. The toxic metal cadmium, used in batteries and nuclear reactor shields, is found in these tobacco products.
   🚭 *Smoked Tobacco and Smokeless Tobacco.*

5. These tobacco products contain or produce formaldehyde, an embalming fluid used to preserve organic tissue.
   🚭 *Smoked Tobacco, Smokeless Tobacco, and ENDS.*

6. More nicotine is absorbed by the body from the use of these products than by smoking one cigarette.
   🚭 *Smokeless Tobacco Products.*

7. Use of these tobacco products is not allowed in most public spaces because of the effects it has on the people around the user. 🚭 *Smoked Tobacco and ENDS.*

Secondhand smoke and vapor fills the air around the user and is inhaled by the nonsmokers around them. Even brief exposure is harmful because the nonsmoker inhales many of the same poisons as the smoker.

❌ *Collect the Tobacco Product Category Cards.*
3. Media Spin

With all of the information we have about the health risks of using tobacco products, it’s surprising that anyone would begin such a nasty and harmful habit. Most teens are smart and don’t start. Why do you think the few teens that choose to use nicotine do so in the first place? To look cool or to fit in. Maybe they think nicotine use will make them cool or glamorous. They might also overestimate its use thinking “everybody does it.”

Images of nicotine use in the media can influence people’s perceptions of how much it is really used. Media images promote the perception that nicotine use leads to popularity, peer acceptance, and a positive self-image.

TV shows and movies are not reality and most of us know this. That’s why, despite all the nicotine use on TV and in movies and online, the great majority of teens, adults, athletes, and celebrities do not use nicotine. So, don’t let the media sway you into thinking “everybody does it” or that using nicotine makes you look cool.

4. Toxic Concentration

Tobacco products are made of some pretty nasty stuff. Now we’re going to find out how the chemicals and other carcinogens in tobacco products affect your bodies in a game called “Toxic Concentration.”

Open your workbooks to page 17. There are five nicotine use categories: The Unfiltered Facts, Media Influences, Short-Term Effects, Social Consequences, and Tobacco-Related Diseases. Review the nicotine use categories and cards in each category. You will need to be familiar with these categories to play the game.

_allow time for the students to review the nicotine categories in their workbooks._
Lesson 7 A Toxic Waste - Effects of Nicotine Use

In a moment, you will get into pairs to play. I will give each pair two decks of cards, one deck of Quest Cards...

Hold up the Quest Cards. ...and one deck of Memory Cards.
Hold up the Memory Cards.

Place the Quest Cards off to the side in a face down draw pile. Arrange the Memory Cards face down in three rows of seven.

The object of the game is to match each Quest Card with a Memory Card. On your turn, draw a Quest Card and read it aloud. For example, if you draw a Quest Card that reads “Short-term Effects”, which card set should you look for? Short-term Effects.

Very good! The rest of the card reads, “The tar and nicotine found in cigarette smoke stain the fingernails.” Which card in the “Short-term Effects” category matches this Quest Card?

Stained Fingernails. Excellent!

Now, find the Memory Card that matches the Quest Card. If you find the Stained Fingernails card, then you have a match. Place both cards off to the side and mark the box in the memory card on your workbook page. It is now the other player’s turn.

If you turn over a Memory Card that does not match the Quest Card, put the Memory Card face down again and keep the Quest Card. It is now the next player’s turn. Do not draw a new Quest Card until you have matched the Quest Card you are holding.

The game continues in this fashion until all of the cards are matched. This game challenges your memory so pay attention to the cards your opponent flips over. It might be the match you need.

Shuffle each deck of cards when you receive them. Use the Game Instructions Card if you need additional help setting up the game or taking a turn. Put the students into pairs and allow time for them to play the game. The students will need several minutes after the game to tally their matches and answer the remaining questions in their workbooks.
Time is up. Now, look at your workbook page. Each card match is worth one point. Tally your matches. Write down the number in the “Total” space at the bottom of the page. The player with the most points wins!

We’ve learned a lot today about the harmful effects of nicotine use: it’s hazardous to our health, it’s addictive, it’s expensive, and it makes our clothes and our breath reek. To conclude today’s lesson about the harmful effects of nicotine, pick three facts about nicotine that made the greatest impact on your decision to stay nicotine free. Write these facts down at the bottom of page 17.

If time permits, call on a few students to share their answers.

Next week, we will talk about what influences some teenagers to use another addictive drug.

- Collect the game materials.
- Collect the Student Workbooks.
- Distribute Home Workout 7.