



Lesson Plan

Listerine: Miracle Liquid or Product in Search of a Purpose?

SUMMARY

Everyone knows that Listerine kills the germs that cause bad breath. You probably assumed that meant that Listerine would cure bad breath. But it doesn't. Nor does it cure dandruff. Or prevent colds. Or eliminate the need for flossing. That, of course, hasn't kept the makers of Listerine from making all of those claims. This lesson examines misleading (and even outright false) advertisements for Listerine, a well-known household product. Students will locate and analyze several alternative sources of information about Listerine's claims and weigh their credibility.

OBJECTIVES

In this activity students will:

- Review and analyze the claims of several different Listerine advertisements.
- Review and analyze material from several different sources that comment on the advertising claims made by Listerine.
- Determine the credibility of different sources that comment on the advertising claims made by Listerine.
- Understand the importance of detecting misleading advertising.

BACKGROUND

Students already will be familiar with Listerine and its ubiquitous claims that it "kills the germs that cause bad breath" and is effective against formation of dental plaque. Few will be aware of Listerine's decades-long history of blatantly false advertising leading to a landmark U.S. Court of Appeals decision, *Warner-Lambert Co. v. Federal Trade Commission*, which the Supreme Court upheld in 1978. Even fewer will be aware of a more recent court decision holding that Listerine's claims to be "as effective as flossing" were unsupported by scientific evidence and, in the opinion of the federal judge in that case, detrimental to public health. Students probably will assume that because Listerine kills germs it is, therefore, effective against bad breath, a logical fallacy. The American Dental Association and other medical authorities have long said mouthwashes are not effective against bad breath.

In this lesson, students will explore the checkered history of this product's advertising, learn to weigh and evaluate alternative sources of information about the product's claims, and learn that even a literally true statement can create a false impression if the listener isn't careful to ask the right questions and think clearly.

MATERIALS

Advertisements:

1. "Look Out for a Cold" advertisement, 1941
<http://factchecked.org/Downloads/Listerine.ads.1.and.2.pdf>
2. "Dandruff can be cured with Listerine" advertisement, 1937
<http://factchecked.org/Downloads/Listerine.ads.1.and.2.pdf>
3. Listerine video advertisement storyboard, c. 1960
<http://factchecked.org/Downloads/Listerine.ad.3.pdf>
4. "As effective as floss" video advertisement storyboard, 2004
<http://factchecked.org/Downloads/LessonPlans/Listerine/Listerine.ad.4.pdf>

Research documents (each document goes with at least one of the above ads, as indicated in parentheses):

1. 1931 editorial from the Journal of the American Medical Association attacking Listerine's advertising claims as unproven and an affront to the scientist Joseph Lister. (Ads #1, 2 and 3)
http://scriptorium.lib.duke.edu/dynaweb/mma/supplementary/@Generic_BookTextView/948;nh=1?DwebQuery=mm1170+in+%3Cunitid%3E#X.
2. 1977 court opinion: *Warner-Lambert Co. v. Federal Trade Commission*, upholding the FTC's order that the company run \$10 million worth of corrective advertising to compensate for a 50-year history of falsely claiming that the product is effective against colds and sore throats. (See especially highlighted portions.) (Ad #1)
http://factchecked.org/Downloads/LessonPlans/Listerine/Warner-Lambert_v_FTC.pdf
3. 1978 Washington Post article describing Federal Trade Commission's seven-year battle to get Listerine's marketer to stop claiming it could prevent colds, a case that the company fought all the way to the U.S. Supreme Court and lost. (Ad #1)
<http://factchecked.org/Downloads/LessonPlans/Listerine/Washington%20Post%20Story.pdf>
4. Entry from the National Library of Medicine that shows dandruff is caused by a fungus, not by germs. (Ad #2)
<http://www.nlm.nih.gov/medlineplus/ency/article/001465.htm>
5. American Dental Association's statement that mouthwashes "are generally cosmetic and do not have a long-lasting effect on bad breath." (Ad #3)
http://www.ada.org/public/topics/bad_breath.asp
6. Article from California legal publication, Continuing Education of the Bar, describing a federal court ruling against Pfizer's claim that Listerine is as effective as flossing. (Ad #4)
<http://ceb.com/newsletter12/ListerineAd.htm>
7. A copy of Judge Denny Chin's 2005 decision in the case *McNeil-PPC Inc. v. Pfizer Inc.*, 351 F. Supp. 2d 226 (S.D.N.Y. 2005). (Ad #4)
http://factchecked.org/Downloads/LessonPlans/Listerine/Listerine_Chin%20Decision.pdf

8. Study published in the Journal of the American Dental Association describing clinical trial showing that “rinsing twice daily with an essential oil-containing mouthrinse was at least as good as flossing daily in reducing interproximal plaque and gingivitis.” (Ad #4)
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12699051&dopt=Abstract
9. Listerine Ad Analysis Questions student handout.
[http://factchecked.org/Downloads/Listerine Ad Analysis Questions.pdf](http://factchecked.org/Downloads/Listerine%20Ad%20Analysis%20Questions.pdf)
10. “Don’t be Fooled” handout – FactCheck’s guide to avoiding deception.
<http://factchecked.org/ToolsOfTheTrade.aspx>

PROCEDURE

Before class, make enough packets of the advertisements above so you have one packet per group of 3 to 5 students. Also make a second set of packets of the research documents listed above, correlated with the designated ads. Include a copy of the Listerine Ad Analysis Questions at the front of each of the second packets. There should be enough copies of the handout “Don’t be Fooled” so that each student can have one.

In the full class, ask students some general questions:

- Do you believe what you see and hear in TV commercials and other such advertising?
- Do advertisers tell the truth?
- What do you know about one highly advertised household product: Listerine mouthwash? What does it do? Is it effective?
- How many of you use Listerine or a similar product? For what reasons did you choose this product over others?

Now distribute the “Don’t be Fooled: A Process for Avoiding Deception” handout and explain to the class that they will be examining some of the claims made for Listerine in advertising over the years, along with evidence that may support or contradict those claims. Explain that they should apply the five steps outlined in the handout.

Specifically, they should:

- **Keep an open mind.** Don’t fall into the trap of thinking a claim is correct just because it fits your biases.
- **Ask the right questions.** Look at what the ad is trying to convince you to believe. Examine each factual claim and ask what evidence would prove it right or wrong.
- **Cross-check.** Look for more than one source of evidence before making up your mind.
- **Consider the source.** Think about which sources of information are most trustworthy.
- **Weigh the evidence.** Do the facts support the ad’s message?

EXERCISES

Exercise #1 – Keeping an open mind, asking the right questions

To the teacher: Emphasize to students the need to keep an open mind in their research and analysis. People tend to accept any information that supports what they already believe and reject information that conflicts with those beliefs. Students need to make an effort to listen to all sides to avoid accepting inaccurate information as truth.

Place students in small groups of 3 to 5. Distribute the first packet — containing advertisements only — to each group. Give students a few moments to review the advertisements, then ask the following:

- Describe the different claims made for Listerine in each of the advertisements.
- What evidence do the ads use to support the claims?
- What other advertising techniques do the ads use to make their points?
- Why do you – or don't you – find the ads' claims convincing?
- List some methods or sources you would use to check whether the ads are truthful.

Exercise # 2 – Asking the right questions

To the teacher: Point out to students that to be good critical thinkers, they need to ask questions. It is important to know who is making the statements and the sources of their information. It is also good to ask how the information presented can be proved or disproved. How precise is the language used? Is it based on fact or opinion?

Have students review the claims made in the ad and come up with questions in the following areas to examine the information presented. This is a brainstorming exercise to get them thinking analytically.

- The sponsor of the ads
- The advertisement's claims to reduce cold symptoms, cure dandruff and bad breath
- The source of information presented in the ad
- Information from independent sources on Listerine's benefits
- Advertising techniques and words used in Listerine ads to sway the consumer

Exercise #3 – Cross-checking / Consider the source

To the teacher: It's important that students review several sources when verifying information. When ads make statements as fact, these should be verified through different, preferably neutral, sources. Two or three reliable sources independently reporting the same fact is a good indication the information is accurate. If two sources report different information, then more investigation will likely be needed.

Now distribute to students the second packet of materials that contain the research on Listerine advertising claims. Assign one advertisement to each group. It's OK if more than one group reviews the same ad. Ask them to review the material and discuss the questions on the Listerine Ad Analysis Questions student handout in their small groups.

Exercise #4 – Weighing the evidence

To the teacher: Help students understand what all the evidence means. They need to evaluate the credibility of the sources of information presented, the difference between

random anecdotes and real scientific data based on credible studies. They also need to examine “cause and effect” relationships to make sure the effects are credibly related to the causes. If your class has completed the FactCheckED.org lesson plan on fallacies, you might note that most of the ads in this lesson contain two booby traps for the inattentive: suppressed evidence (really suppressed in this case, as the ads make claims for which there is no evidence at all) and appeals to inappropriate authority (by not citing evidence, the ads effectively ask you to take their word for it, but, as the maker of Listerine is obviously not a disinterested source, we should generally not just accept its word).

Have students, in their groups, review what they have found and discuss the following questions:

- What conclusions would you draw about Listerine’s advertising methods?
- Why do you think such methods are so effective?
- Do you think the court was right to take action against Listerine?

After all groups have finished their analyses, bring everyone together as a class again. Using the questions above, have a discussion about the students’ findings.

OPTIONAL ACTIVITY

As a follow-up activity, have students develop a five- to 10-minute poster presentation making only claims about Listerine that are supported by evidence and presented in what a reasonable consumer would find to be a fair and balanced way. Discuss the difference between such a fair and accurate ad and the ads that have actually appeared. Ask: Would consumers be as likely to buy if they had full information? Would advertisers run such ads?

CORRELATION TO NATIONAL STANDARDS

For a more detailed version of these standards, please click [here](#).

National Social Studies Standards

VII. Production, Distribution, and Consumption Social studies programs should include experiences that provide for the study of how people organize for the production, distribution and consumption of good and services.

X. Civic Ideals and Practices Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in democratic republic.

Essential Skills for Social Studies

Acquiring Information

A. Reading Skills

1. Comprehension
2. Vocabulary

B. Study Skills

1. Find Information
2. Arrange Information in Usable Forms

- C. *Reference and Information Search Skills*
 - 2. Special References
 - 3. Maps, Globes, & Graphics
- D. *Technical Skills Unique to Electronic Devices*
 - 1. Computer

Organizing and Using Information

- A. *Thinking Skills*
 - 1. Classify Information
 - 2. Interpret Information
 - 3. Analyze Information
 - 4. Summarize Information
 - 5. Synthesize Information
 - 6. Evaluate Information

B. *Decision-making skills*

C. *Metacognitive skills*

Interpersonal Relationships & Social Participation

A. *Personal Skills*

C. *Social and Political Participation Skills*

Democratic Beliefs and Values

B. **Freedoms of the Individual**

C. **Responsibilities of the Individual**

National Mathematics Standards, Grades 9-12

Data analysis and probability standard

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Develop and evaluate inferences and predictions that are based on data

Process Standards

Connections standard

National Educational Technology Standards, Grades 9-12

Profiles for Technology Literate Students

Performance Indicators

- 2. Make informed choices among technology systems, resources, and services.
- 7. Routinely and efficiently use online information resources to meet needs for collaboration, research, publication, communication, and productivity.
- 8. Select and apply technology tools for research, information analysis, problem solving, and decision making in content learning.

Information Literacy Standards

Information Literacy

Standard 1 accesses information efficiently and effectively.

Standard 2 evaluates information critically and competently.

Standard 3 uses information accurately and creatively.

Social Responsibility

Standard 7 recognizes the importance of information to a democratic society.

Standard 8 practices ethical behavior in regard to information and information technology.

Standard 9 participates effectively in groups to pursue and generate information.

English Language Arts Standards

Standard 1 Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment.

Standard 3 Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts.

Standard 5 Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

Standard 6 Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.

Standard 7 Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts artifacts, people) to communicate their discoveries in ways that suit their purpose and audience)

Standard 8 Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

Standard 12 Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

National Science Standards

Science as Inquiry

Content Standard A

Science in Personal and Social Perspectives

Content Standard F

History and Nature of Science

Content Standard G

Health Education Standards

Health Education Standard 2 Students will analyze the influence of family, peers, culture, media, technology and other factors on health behaviors.

Health Education Standard 3 Students will demonstrate the ability to assess valid information and products and services to enhance health.

Health Education Standard 5 Students will demonstrate the ability to use decision-making skills to enhance health.

ABOUT THE AUTHOR

Greg Timmons has been a social studies teacher for more than 30 years in Portland, Oregon, and now resides in Washington and Montana. He is executive director of the Constitution Project, which produces educational materials and workshops on the U.S. Constitution. He is also a freelance curriculum writer and educational consultant for various PBS programs and other education publications including two NEP Issues Today Wall Maps on Russia and the Middle East. He is a member of the board of directors of the Oregon Council for the Social Studies and has served on committees for the National Council for the Social Studies.