

## **Teachers Guide: The Alternative Fix**

### **About the Film:**

Over the past few years, the popularity -- and profitability -- of complementary and alternative medicine has exploded. Under pressure from everyone from consumers to Congress -- and tempted by huge grants -- major hospitals and medical schools have embraced therapies that they once dismissed as quackery. So accepted, in fact, have alternative medical treatments become that an entire center of the National Institutes of Health is now devoted to it. But the question remains: Do these treatments actually work? FRONTLINE examines the controversy over complementary and alternative medical treatments.

Visit "**The Alternative Fix**" **Web site** for more on this story. [URL: <http://www.pbs.org/frontline/shows/altmed>]

### **A Note to Teachers:**

- For classes in Social Studies, Language Arts and Health; Grade level 9th – 12th

These teaching activities are designed to help students explore the history of the government's involvement in medicine, the popularity of alternative medicine in today's society and the dangers that some alternative medicines may pose.

According to a 1991 national survey, one-third of the population acknowledged using alternative medicine. Currently, Americans spend \$48 billion a year on alternative therapies. The National Center for Complementary and Alternative Medicine (NCCAM) defines complementary and alternative medicine (CAM) as "a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine." The NCCAM Web site goes on to state: "While some scientific evidence exists regarding some CAM therapies, for most there are key questions that are yet to be answered through well-designed scientific studies -- questions such as whether they are safe and whether they work for the diseases or medical conditions for which they are used." The FRONTLINE documentary "The Alternative Fix" examines some of the myriad alternative practices, supplements and therapies, as well as the motivations of those who pursue them. This program provides a provocative picture of health care today and provides an avenue for students to:

- Explore their understanding of current health issues
- Research the development of the Federal Drug Administration
- Examine how literature and media influence public policy

### **Lesson Plans**

## **PRE-VIEWING LESSON PLAN:**

### **What is Complementary and Alternative Medicine?**

Students will identify the various kinds of CAM through large group discussion and individual research.

## **VIEWING LESSON PLAN:**

### **Student Viewing Guides**

Teachers can assign one of two Viewing Guides -- a true and false guide or a short answer guide -- which requires students to take notes on key practices and individuals depicted in the film.

## **POST-VIEWING LESSON PLANS:**

### **Regulating Drugs: The Creation of the FDA**

Students will learn about the history and function of the FDA. They will look at the concerns facing society today and compare them to the problems of the Progressive Era.

### **The Progressive Era: Public Pressure and Government Actions**

Using E-books online, students will read sections of Upton Sinclair's *The Jungle* and examine societal problems and solutions during the Progressive Era.

## **Purchasing the Video**

"The Alternative Fix" can be purchased from **ShopPBS for Teachers** [URL: <http://teacher.shop.pbs.org/cust/cdeploy?ecaction=ecwalkin&template=shoppbsforteachers/index.en.htm>]. [Also please note: FRONTLINE is streaming the entire film online on **The Alternative Fix Web site**. [URL: <http://www.pbs.org/frontline/shows/altmed>]

## **Credits**

This teacher guide was developed by Simone Bloom Nathan of Media Education Consultants. It was written by Pat Grimmer, chair of the Social Studies Department at Carbondale Community High School in Carbondale Illinois. Ellen Greenblatt of University High School San Francisco was an adviser.

## **PRE-VIEWING LESSON PLAN:**

### **What is Complementary and Alternative Medicine?**

This lesson will take 50 – 60 minutes.

#### **Materials Needed:**

Students will need Internet access, writing materials and student handouts.

#### **Lesson Objectives:**

In this lesson, students will:

- Evaluate their understanding of alternative medicines
- Compare complementary medicine and alternative medicine
- Examine five categories of CAM therapies
- Research the popularity of these therapies
- Share their research findings with their classmates

#### **Procedure:**

##### **Part One:**

1. Write the word "alternative" on the board and ask the students to define it. Try to get the response that it means a choice outside of the norm.
2. Now add the word "medicine" and ask students to brainstorm different kinds of alternative medicines.
3. Finally ask students to guess how many Americans use this form of medicine. Tell them that in a survey, 33 percent of Americans reported using alternative medicines.

##### **Part Two:**

Divide the students into five groups and assign each group to research one of the following categories of alternative medicine as defined on the NCCAM Web site at:

**<http://nccam.nih.gov/health/whatiscam/>**

- Alternative Medical Systems
- Mind-body Interventions
- Biologically Based Therapies
- Manipulative and Body-based Methods
- Energy Therapies

Point out to the students that there are two sections to the student handout.

- Tell them to research Section I on the handout as a group.
- Tell them to research Section II on the handout independently.
- Each of the five groups of students should present a short research report to their classmates.
- Invite the students to consider what impact the "placebo effect" has on studies involving alternative medicine. Explain that when people believe a therapy will work, they may sense an improvement. This is a phenomenon known as the placebo effect and it makes it difficult to verify if the patient is

actually improving. For more information on the placebo effect, point students to "**The Placebo Effect**" on "The Alternative Fix" Web site. [URL: <http://www.pbs.org/frontline/shows/altmed/snake/placebo.html>]

**Method of Assessment**

Students should turn in their research handout and the notes they take during the group presentations.

**Media Literacy Note:** Students need to be aware that Web sites sometimes present only one view of an issue. They should be encouraged to interrogate Web sites even as they are reading. Guiding questions as they work through these activities should be: What did you learn from this site? Who sponsors this site? What bias might the sponsor have?

**STUDENT HANDOUT:  
What is Alternative and Complementary Medicine?**

**Section I.**

The following Web site has been prepared by the National Center for Alternative and Complementary Medicine [NCCAM]. Use this Web page to answer the following questions:

**<http://nccam.nih.gov/health/whatiscam/>**

1. What are the definitions for alternative and complementary medicines?
2. What is the difference between alternative medicine and complementary medicine?
3. In the section that discusses the major types of complementary and alternative medicines find your assigned category. Read and discuss the information for your category. Using your own words, summarize the main points.
4. Look at the **Dictionary of Terms** and using your own words, summarize the terms that apply to your topic.

**Section II.**

Using the following Web sites, look for additional information on the category of medicine that you are researching and answer the following questions:

Alternative Health News Online

**<http://www.altmedicine.com/Default.asp?HomePage=Yes>**

United States Food and Drug Administration (FDA)

**<http://www.fda.gov/>**

1Up Health

**<http://www.1uphealth.com>**

1. What are three kinds of illnesses treated by your alternative medicine?

2. Summarize two case studies that were presented.
  
3. Was there scientific evidence presented to support the claims of recovery? Explain.
  
4. What factors might most influence people to try this kind of medicine?
  
5. What are positive or negative things about this kind of medicine?
  
6. Does the placebo effect seem to have an impact on the category of alternative medicine that you studied? If so, how?
  
7. Which Web site gave the most complete information on alternative medicine? What may the inclusion or omission of information on alternative medicine tell you about the Web site?

## **VIEWING LESSON PLAN:**

### **Student Viewing Guide: "The Alternative Fix"**

#### **Materials Needed:**

The video "The Alternative Fix" [Note: This video can be purchased online at ShopPBS For Teachers. The film is also streamed in full on "The Alternative Fix" Web site. See the URLs on the front page of this guide.]

Student Viewing Guides: True and False Questions or Short Answer Questions

#### **Lesson Objectives:**

In this lesson, students will:

- Watch the documentary "The Alternative Fix" and answer questions about its content
- Practice critical thinking skills as they view the documentary
- Discuss the merits and problems of alternative medicine

#### **Procedure:**

1. Give students one of the two viewing guides and have them read the questions before watching the documentary.
2. Ask students who are using the true and false guide to look and see if they know any of the answers already. Remind them to correct the false statements as they view the video.
3. Students who are using the short answer guide will need to take notes throughout the viewing.
4. After viewing, conduct a large group discussion on the merits and problems of alternative medicines.

#### **Method of Assessment**

Students should complete as homework the following assignment:

Please evaluate the validity of the following statement in 200 – 300 words. Be very factual.

**"It is clear that alternative medicine must work because over 33 percent of the people in the United States use it!"**

#### **Answers for the True and False Guide:**

1. F; Beth Israel has accepted acupuncture and many other forms of alternative medicine.
2. F Many hospitals use a wide variety of alternative medicines.
3. T
4. T
5. F; Many scientists and politicians disagree on the efficacy of alternative medicines.

6. T
7. T
8. T
9. F; Deep tissue massage is designed to remove emotional and physical blockages to healing.
10. T
11. T
12. T
13. F; The University of Maryland study is not yet completed and is only focused on osteoarthritis of the knee.
14. T
15. T
16. F; Congress did pass DSHEA in 1994.
17. T
18. T
19. T
20. T
21. F; Homeopathic remedies involve treating patients with highly diluted substances.



**"The Alternative Fix"**  
**STUDENT VIEWING GUIDE**  
**True and False Questions**

Answer the following true and false questions as you view the documentary.  
Please correct any false statement.

1. Beth Israel Medical Center has accepted acupuncture, but not other forms of alternative medicine.
2. Most hospitals continue to avoid alternative medicine.
3. Senator Tom Harkin was influenced to support alternative medicine because of a friend's success with an alternative treatment.
4. Senator Harkin asked Congress to have NIH study alternative medicines.
5. Most politicians and scientists seem to agree on the efficacy of alternative medicines.
6. Dr. David Eisenberg commissioned a survey to see how many people use alternative medicines.
7. It has been reported that one in three Americans use alternative medicines.
8. Dr. Andrew Weil believes that alternative medicines make people feel more in control of their treatments.
9. The purpose of deep tissue massage is to help people lose weight.
10. Some people are attracted to alternative medicine because they believe traditional doctors can be too impersonal.
11. Some scientists believe that in funding alternative treatments, Congress advocates unproven therapies.
12. In 1998, Senator Harkin was able to get a full alternative medicine research center funded.
13. The University of Maryland has reported that acupuncture relieves pain from most illnesses.
14. A study has shown that St. John's Wort is not an effective treatment for severe depression.
15. The use of St. John's Wort can interfere with the effectiveness of other drugs.
16. In 1994, Congress rejected the creation of the Dietary Supplemental Health and Education Act (DSHEA).
17. According to Senator Orrin Hatch, over 100,000,000 Americans take dietary supplements.
18. Dr. Robert Park believes that drug companies profited from DSHEA.
19. Senator Hatch has received substantial campaign contributions from the supplement industry.
20. Dr. Nicholas Gonzalez treats people who believe traditional medicine will not help them.
21. Homeopathy is most concerned with healthful eating.

**"The Alternative Fix"**  
**STUDENT VIEWING GUIDE**  
**Short Answers**

Please take notes on the following questions as you watch the video. Many of these appear throughout the film.

1. How and why have hospitals changed their methods of dealing with illness?
  
  
  
  
  
  
  
  
  
  
2. Why is Senator Tom Harkin a supporter of alternative medicine? What actions has he taken to show his support? Do you think he has influenced the popular use of alternative medicine?
  
  
  
  
  
  
  
  
  
  
3. Why did Dr. David Eisenberg commission a survey on the use of alternative medicine? What did the survey reveal?
  
  
  
  
  
  
  
  
  
  
4. What kind of medicine does Papa Joe practice? Why do you think people believe in his treatment?
  
  
  
  
  
  
  
  
  
  
5. What is the treatment prescribed by Dr. Nicholas Gonzalez?
  
  
  
  
  
  
  
  
  
  
6. How has Senator Orrin Hatch influenced the alternative medicine debate?
  
  
  
  
  
  
  
  
  
  
7. What problems can occur in the use of alternative medicine?
  
  
  
  
  
  
  
  
  
  
8. Why do some scientists criticize political support of research into alternative medicine?

## **POST-VIEWING LESSON PLAN:**

### **Regulating Drugs: The Creation of the FDA**

Students will learn about the history and function of the Food and Drug Administration (FDA). They will look at concerns facing society today and compare them to the problems of the Progressive Era.

This lesson is divided into two steps. (Note: Each step can be completed independently.)

- **Step One "Regulating Drugs and Services"** requires 30 – 40 minutes.
- **Step Two "History of the FDA"** requires 40 – 50 minutes.

#### **Materials needed:**

Students will need Internet access, writing materials and a random selection of popular magazines.

#### **Lesson Objectives:**

In this lesson students will:

- Explore the jurisdiction of the FDA
- Examine major issues facing the FDA today
- Trace the development of the FDA

#### **Step One "Regulating Drugs and Services"**

##### **Procedure:**

The FDA has a complex history. Regulation of food and drugs can be traced back to colonial times. In 1948, the federal government began inspecting imported drugs. Today, the FDA is a scientific, public health and regulatory agency responsible for overseeing a large number of consumer products. To determine how much the students know about this agency, write the following questions on the board or an overhead:

- What kinds of food and health products does the United States Food and Drug Administration regulate?
- What products or services are excluded from regulation?
- What products or services receive major attention from the FDA today?

Students can brainstorm answers to these questions by examining copies of current magazines. Teachers can obtain magazine copies, up to two or three months old, from the school library. Have the students skim the magazines and take notes on articles and advertisements that illustrate:

- Products or services regulated by the FDA
- Products or services not regulated by the FDA
- Products or services that receive major attention by the FDA

Give the students five–10 minutes to examine magazines and then ask students what answers they found. List the answers on the board.

Students should check their answers by selecting "What FDA Regulates" and

"What the FDA Does Not Regulate" found on the FDA's Web site at:  
<http://www.fda.gov/opacom/hpview.html>

Using the same Web page, have students select "Hot Topics" in the upper right corner.

- Ask the students to name some hot topics and list these on the board.
- Ask the students to read two articles on any of the topics listed.
- As a large group, discuss which of these topics may have been of concern at the turn of the 20th century when the Pure Food and Drug Act and the Meat Inspection Act were passed?

## **Step Two "History of the FDA"**

### **Procedure:**

The article "History of the FDA," on the FDA's Web site, traces the development of the modern FDA from 1906 with the passage of the Pure Food and Drug Act. The article, written by John P. Swann from the FDA History Office, is quite comprehensive. This material would be most appropriate for 10th–12th grade health or government classes and can be found at:

<http://www.fda.gov/oc/history/historyoffda/default.htm>

Divide the class into six groups and assign each group one of the sections from the reading:

1. Origins
2. The 1906 Food and Drugs Act and Its Enforcement
3. The 1938 Food, Drug and Cosmetic Act
4. Drugs and Foods Under the 1938 Act and Its Amendments
5. Regulating Cosmetics, Devices, and Veterinary Medicine After 1938
6. Trends in the Last Quarter-Century

Ask students to summarize, using their own words, the major events, problems, laws and individuals in the reading. Each student should read his section independently and take notes. Groups should compile a group summary using the individual notes. A group leader should be selected to present to the class.

### **Method of Evaluation:**

Collect the individual notes and group summary.

### **Extending the Lesson:**

#### **Teachers Resources Health**

<http://www.glencoe.com/sec/health/teachres/lessonplans/rsdrug.shtml>

This lesson plan may be used in health classes that are studying topics in

medicines, prescriptions and over-the-counter drugs. This lesson helps students understand the process by which medications are approved for use in the United States.

**Dangerous Prescription**

<http://www.pbs.org/wgbh/pages/frontline/shows/prescription>

FRONTLINE's film and Web site investigating the FDA and drug safety will air starting Nov. 13, 2003.

## **POST-VIEWING LESSON PLAN:** **Progressive Era: Public Pressure and Government Actions**

Students will read sections of Upton Sinclair's *The Jungle* and examine societal problems during the Progressive Era. This lesson will take 60–90 minutes.

### **Materials needed:**

Students will need Internet access and writing materials.

### **Lesson Objectives:**

In this lesson students will:

- Examine the problems in the meat industry at the turn of the 20th century
- Discuss the kinds of food concerns that exist in today's meat industry
- Make connections between regulatory issues in the meat industry at the turn of the last century and the alternative medicine industry today.

### **Procedure:**

Chapters three and nine in *The Jungle* best illustrate why the Meat Inspection Act was passed. Ask students to carefully read these chapters at:

Chapter 3: <http://sunsite.berkeley.edu/Literature/Sinclair/TheJungle/03.html>

Chapter 9: <http://sunsite.berkeley.edu/Literature/Sinclair/TheJungle/09.html>

Have students individually summarize the problems explored in *The Jungle* and conduct a large group discussion on what problems exist in the meat industry today. Also, ask students if they see any connections between these problems and the questions raised about regulation in "The Alternative Fix."

### **Method of Evaluation:**

Collect student summaries and class notes.

Students in health classes or government could be assigned homework to find one article that documents the kinds of meat concerns we have today.

### **Extending the Lesson:**

#### **Modern Meat**

<http://www.pbs.org/wgbh/pages/frontline/shows/meat/>

Students can learn about many issues relating to the meat industry today by exploring the Web site of this April 2002 FRONTLINE documentary.

#### **Discoveryschool.com**

<http://school.discovery.com/lessonplans/programs/poweroffiction?>

This lesson plan for 9-12th grade literature students uses *The Jungle* to explore books with social themes. To accompany this lesson, teachers can find an online

copy of *The Jungle* at: <http://sunsite.berkeley.edu/Literature/Sinclair/TheJungle/>

## **INTERNET RESOURCES**

### **National Center for Alternative and Complementary Medicine (NCCAM)**

<http://nccam.nih.gov/health/whatiscam/>

Affiliated with the National Institute for Health, NCCAM is the federal government's lead agency for scientific research on complementary and alternative medicine. This is a very comprehensive Web site that describes different kinds of treatments, defines terms and presents research findings. Its page entitled "**Ten Things to Know about Evaluating Medical Resources on the Web**" is a useful media literacy tool. [URL: <http://nccam.nih.gov/health/webresources/>]

### **United States Food and Drug Administration (FDA)**

<http://www.fda.gov/>

One of the missions of the FDA is to help the public get accurate and scientifically based information on questions of health. Their Web site has an "A-Z Index" of topics as well as a search engine powered by Google. The site has an extensive history of the development of the FDA.

### **British Homeopathic Association**

[http://www.trusthomeopathy.org/case/cas\\_over.html](http://www.trusthomeopathy.org/case/cas_over.html)

Students may find it of interest to examine alternative medicine in a country that has been using it since 1948. A comprehensive history of the development of homeopathic medicine, hospitals, and practitioners in Great Britain can be found at this Web site. Of special interest are the sections on Case Trials, Evidence for Homeopathy and Case Histories, which provide documentation on the success of homeopathy in Great Britain.

### **1Up Health**

<http://www.1uphealth.com>

This medical and health information resource has a large database of health articles and reference materials covering more than 4,000 topics "including diseases, tests, symptoms, injuries, surgeries, nutrition, poisons, and special topics." It has a collection of links and is updated on a daily basis. However, be aware that 1Up Health is a business that accepts advertisements.

### **Alternative Medicine Homepage**

<http://www.pitt.edu/~cbw/altm.html>

Created by a medical librarian at the University of Pittsburgh, this site has links to a very comprehensive database including alternative medicine resources and



other Internet links.

**Alternative Health News Online**

<http://www.altmedicine.com/Default.asp?HomePage=Yes>

Journalists created this Web site to develop "the most-helpful alternative, complementary and preventative health-news pages on the Internet." Its links include professional health organizations, a wide variety of government sites and other Web sites that are updated daily and weekly. The site also notes: "We thoroughly searched the Internet to try to bring some of the most informative and credible sites we could find. However, we wish that some sites would have carried more scientific evidence." Users are given a number of media literacy points to keep in mind while viewing their site.