



# Tampering with Nature,

*an ABCNEWS special with John Stossel*

**Subjects:** Social Studies and Language Arts

**Grade Levels:** 6–12

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## Synopsis

According to ABC newscaster John Stossel, "We alter our environment not to destroy it, but to make our lives better in hundreds of ways. Let's hope we continue to... create a future that's far more comfortable and kinder than anything nature intended." Yet recent scientific advances, Stossel contends, have met with strident protests, fear mongering in schools, and even eco-terrorism.

In this program, which ABC originally aired as a one-hour special, John Stossel explores such hot button issues as global warming, genetic engineering, and human cloning. Are we destroying our ecosystem by "tampering with nature"? In response to this highly controversial question, Stossel interviews scientists, farmers, elementary school kids, environmental educators and activists.

**abc NEWS**  
**Classroom Edition**

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The DVD contains the following chapters. You might use any or all chapters as part of a science, social studies, or language arts unit focussing on environmental education, critical thinking, drawing conclusions, and identifying facts and opinions.

### **Chapter 1: Environmental Education?**

We've been "tampering with nature," Stossel points out, since ancient times. Cultivating plants, breeding animals, and developing new medicines are all good examples. If we hadn't altered natural processes, we'd still be "running around naked, hungry, maybe killing a rabbit with a rock, then dying young."

But ever since the first Earth Day in 1970, Stossel reports, environmental activists have publicized the view that tampering with nature is evil. Many classroom teachers and environmental educators scare students unnecessarily by teaching them that humans are destroying the earth, he contends. Using film clips of Earth Day celebrations and interviews with kids, teachers, and activists, Stossel argues that today's environmental curriculum constitutes partisan indoctrination and fear mongering, not education.

### **Chapter 2: Global Warming**

Stossel interviews former Greenpeace Director Patrick Moore, who believes that political activists have "hijacked" the environmental movement that he helped to build. Moore points out that activists distort the truth about such issues as diminishing forestland. Actually, Stossel explains, we have about the same amount of forestland today as we did in the early 1900s. This is because the lumber industry plants tree farms; plus, many acres of unneeded farmland have reverted back to forest.

Activists and the news media also distort the truth and scare people needlessly over the issue of global warming, Stossel contends. He interviews several scientists who believe that even though the world's temperature has risen a degree or two in the last

hundred years, we have no reason to panic. Stossel points out that although media coverage reflects the opposite view, there is no consensus in the scientific community that global warming spells "Armageddon." Interviewee Sallie Baliunas, a physicist who has studied world climate change, argues that even if we drastically cut back on "greenhouse gases," it would cost trillions of dollars and affect temperatures only minimally.

### **Chapter 3: The Good Old Days?**

John Stossel sets out to illustrate that the "good old days" weren't so good after all. His quest takes him from a not-so-primitive treehouse in Hawaii's pristine Waipio Valley, to a restored Native American settlement peopled by reenactors, to Plymouth Bay Colony in the 1600s. Most people romanticize these simpler times and places, says Stossel. However, he points out, life without modern technology required tedious, backbreaking toil. Plus, it was often fatal: half the Pilgrims perished; few Native Americans lived past age 40.

### **Chapter 4: Genetically Engineered Food**

European and American activists are up in arms regarding genetically-engineered crops and growth hormones for farm animals, Stossel reports. Calling these products "Frankenfood" and "crack for cows," environmentalists stage rowdy protests against them. Some protesters resort to property damage and even terrorism. Yet, Stossel and the interviewees contend, changing plants' genetic make-up is safer than old-fashioned crossbreeding methods. Biotechnology, Stossel argues, produces more food and helps to alleviate starvation in Africa and elsewhere.

### **Chapter 5: Human Cloning/Summing Up**

In this segment, John Stossel explores various aspects of cloning, including its possible pitfalls. He interviews cancer patients saved by gene therapy and revisits Dolly the sheep, the first of many animal clones. Regarding human cloning, Stossel interviews Dr. Panos Zavos, a reproductive

expert who hopes to help infertile couples give birth to baby clones. Reverend Patrick Mahoney, another interviewee, argues vehemently against the process. He asks: Who will care for the deformed children that cloning will inevitably produce? The reverend also abhors the quest for “designer kids”; he likens its proponents to Nazi eugenicists who strove to produce a master race. But Stossel talks with others who believe that picking and choosing your unborn child’s traits is comparable to providing an existing child with tooth braces or violin lessons.

### Chapter 6: Give Me a Break

PETA, or People for the Ethical Treatment of Animals, speak out against cruelty to animals. But regarding some of their more extreme activities, such as smearing fake blood on department store windows to protest fur sales, John Stossel exclaims, “Give me a break!”



## Objectives

### The student will:

- learn about scientific topics such as global warming, genetically engineered food, and cloning;
- explore ethical issues that arise when scientists “tamper with nature”;
- use critical thinking to detect faulty logic and distinguish between fact and opinion;
- draw upon historical knowledge during the examination of social and ethical issues;

## Background Information

### John Stossel

Born in 1947, John Stossel is a 1969 graduate of Princeton University, where he earned a BA in psychology. He started his journalism career as a researcher for a Portland, Oregon, television station. When ABC TV first hired him, Stossel became the consumer editor on Good Morning America. He joined ABC’s newsmagazine show, 20/20, in 1981 and rose to the role of co-anchor (with Barbara Walters) in 2003. Stossel began hosting his own one-hour specials in 1994. On these and on his 20/20 opinion segment called Give Me a Break, he deals skeptically with topics ranging from pop culture to politics to censorship to widely believed but unfounded fears. Stossel has received many honors for his work, including 19 Emmy Awards.



## Preview Questions

### Ask these questions prior to viewing Chapter 1: Environmental Education?

1. What does the expression “being at one with nature” mean? Do you wish you could live in the wilderness without modern conveniences and technology? Why or why not?
2. What does the word tampering mean? Do you think it is wrong to “tamper with nature”? What happens when scientists and others change aspects of our natural environment? Give some examples.
3. When you were in elementary school, did teachers or visitors teach you about pollution, recycling, and other environmental topics? Do you remember how these lessons made you feel? Do you believe that people are spoiling the earth? How do you think you formed this opinion? Who encouraged you to think as you do?

### Ask these questions prior to viewing Chapter 2: Global Warming.

4. What is global warming? What changes—if any—do you think global warming causes? Do you think that most scientists agree regarding global warming and its effects?
5. What is an activist? What do you know about environmental activism? Can you name some environmentalist groups? Do you consider yourself an environmentalist? Why or why not?

### Ask these questions prior to viewing Chapter 3: The Good Old Days?

6. What does the expression “the good old days” mean? Do you wish you lived 300 or 400 years ago? Why or why not?
7. If you were a Native American or an English colonist living in North America during the

1600s, do you think you would have a satisfying, happy life? Tell why you think so. Where do you think your picture of life back then comes from?

### Ask these questions prior to viewing Chapter 4: Genetically Engineered Food.

8. What is “genetic engineering”? Have you ever eaten food that is genetically engineered? Can genetically engineered food harm people? What are some benefits of genetically engineered food? Where did you get your information and how did you form your opinions on this topic?
9. What are hormones? Why do some dairy farmers give cows growth hormones? Does this harm the cows? Does it make the cows’ milk harmful to humans? How do you know?

### Ask these questions prior to viewing Chapter 5: Human Cloning/Summing Up.

10. What is a clone? Are there any animal clones alive today? How about human clones? Is it legal to clone humans?
11. Why are some people against creating animal and/or human clones? Are you for or against human cloning? Explain why.

### Ask these questions prior to viewing Chapter 6: Give Me a Break.

12. Have you ever heard of an organization called PETA (PEE-tah)? Do you know what this acronym stands for? What do you think PETA believes in and what kind of activities might they be involved in?

## Postviewing Questions

### Ask these questions after viewing Chapter 1: Environmental Education?

1. According to John Stossel, what would it be like to live a “natural life”?
2. What are some examples of “tampering with nature”? Do you agree with John Stossel that altering nature makes our lives better? Explain your opinion.
3. What does indoctrination mean? Do you think the kids shown in this segment are being educated or indoctrinated? Did your teachers teach similar lessons when you were in elementary school? How did you feel about it then? How do you feel about it now?
4. After John Stossel interviewed one group of kids, their parents rescinded permission for Stossel to use the children’s images or voices. Why do you think the parents did this?

### Ask these questions after viewing Chapter 2: Global Warming.

5. What is Greenpeace? Why does Patrick Moore, a former Greenpeace director, criticize today’s environmental activists? How does he answer those who say that our forests are threatened? John Stossel mentions that Moore receives money from the lumber industry. Do you think this affects Moore’s opinions?
6. Is the world’s climate actually warming? How much? What does the acronym IPCC stand for? What does the IPCC chairman say about global warming? Do most scientists in the world agree with the chairman’s views? Explain how you know.
7. According to Stossel and the scientists he interviews, what are some arguments against the idea that global warming is a terrible threat to humans? Why do some scientists

think we should do to stop global warming? Why might taking such steps threaten the U.S. economy?

8. What do you think about global warming? Is it a major threat or not? Explain why you think as you do.

### Ask these questions after viewing Chapter 3: The Good Old Days?

9. Would you like to make the Waipio Valley your permanent home? Why or why not? Why don’t more people live there today?
10. What does John Stossel hope to show in his interview with two Native Americans who reenact Native American life long ago? What do you think of Stossel’s questions and the interviewees’ responses?
11. What does the term romanticize mean? Do you think most people romanticize “the old days”? Do you? Why or why not?

### Ask these questions after viewing Chapter 4: Genetically Engineered Food.

12. What is plant crossbreeding and how does it compare with today’s genetic engineering processes? According to Stossel and his interviewee, which is safer? How can genetic engineering reduce the amounts of pesticides that farmers use?
13. What are “Frankenfood” and “crack for cows”? Why do activists and others use these terms?
14. Why do activists want dairy farmers to stop giving growth hormones to their cows? What do you think about this issue? Give reasons for your opinion.
15. What are some of the ways that environmental activists protest against genetically engineered food? Are these sorts of protests right or wrong? Explain why you think so.

### Ask these questions after viewing Chapter 5: Human Cloning/Summing Up.

16. How are animals such as mules and poodles similar to clones? What are some problems that have resulted from animal cloning?
17. Why might people be more upset about cloning humans than they are about cloning animals? Do you think it would be immoral to clone people? Why or why not?
18. What are “designer kids”? If it were legal to create them, what problems might arise from letting parents pick and choose their unborn children’s traits?
19. Which of Stossel’s interviewees do you agree and disagree with regarding cloning? Explain your opinions.

### Ask these questions after viewing Chapter 6: Give Me a Break.

20. List some of PETA’s views regarding animal rights. Do you agree or disagree with the organization’s opinions? Explain why.
21. If any, which of PETA’s protest methods do you think are silly or too extreme? Give reasons for your opinions. If you had a strong opinion about some aspect of animal protection, how would you express it?

## Suggested Activities

1. Prior to viewing Tampering with Nature, distribute copies of the Response Chart at the end of this Guide. Have students fill in the chart as they watch the DVD. Then invite them to share and discuss their opinions, feelings, and questions about the issues that John Stossel raises. Help students distinguish verifiable facts from opinions that Stossel and his interviewees present. If some students

disagree with conclusions that the 20/20 reporter draws, encourage them to explain why. Ask them to do library and Internet research to back up their views.

2. Read aloud the following statements from the TV show, one by one. Ask students to tell who makes the statement, and what the speaker means by it. (Inform them that John Stossel makes none of the statements that you will read.)

- “We have met the enemy, and they is us!”
- “They’re using environmental rhetoric to cloak agendas like class warfare and anti-corporatism that, in fact, have almost nothing to do with ecology.”
- “Floods will happen, and we won’t be able to breathe.”
- “Is a trillion dollars sorry enough?”
- “We’ve never eaten BT, and now it’s in all these products.”
- “We want a global moratorium on the release of all genetically modified organisms.... It could mean the extinction of species in the long run.”
- “They took a weed ten thousand years ago and they turned it into corn.”
- “It saved my life.... I don’t like the idea of jacking with nature myself, but for medicinal purposes... you gotta cross that border.”
- “It’s creepier because that’s what you’ve been watching on TV and reading in fiction books, unfortunately.”
- “Banning human cloning reflects our humanity.”

- “There will be some mistakes, but that’s exactly what happens today. Four percent of kids are born with birth defects.”
  - “They’re saying... You must let your child be less intelligent than he might be.”
3. Have students list unfamiliar and/or specialized vocabulary words that John Stossel and his interviewees use in *Tampering with Nature*. Then have them use a dictionary to create “word families” based on the words they collected (see the examples below). Have students define each word and use it in a strong context sentence.
- **breeding:** crossbreeding, purebred, mixed breed, hybrid
  - **indoctrination:** doctrine, doctrinaire
  - **activist:** activism, act, action, actionable
  - **Arctic refuge:** refugee, fugitive
  - **quintupled:** quintuplets, quintessential
  - **environmental:** environmentalism, environmentalist, environment, environs
  - **global warming:** globe, globalization, global economy, globe trotter
  - **genetically engineered:** gene, genetics, geneticist, genome, genesis, engineer, engine, bioengineering
  - **romanticize:** romantic, romance, romancing
4. Have students collect and read current and archived newspaper and magazine articles on global warming, genetically modified food, and human cloning. Also encourage them to read editorials and organizations’ press releases that express various points of view on these issues. Then have students form groups and report on the topics in the following ways:
- Present factual information on the issues, trying to be as objective as possible.
  - Hold debates on the following questions:
    - 1) Is global warming a serious threat that merits costly changes in the ways we use

fossil fuels? 2) Do genetically modified foods help people more than harm them or vice versa? 3) Is human cloning unethical?

- Make predictions regarding future effects that “tampering with nature” may have on society (including cultural and ethical values) and on our physical environment.

### Activities to accompany Chapter 1: Environmental Education?

- Have students conduct a survey to determine how middle- and high-school students rate the environmental education they received in elementary school and/or via Earth Day celebrations and other special programs. For example, researchers might ask whether respondents feel that they received information on both sides of controversial issues such as global warming. Caution students to write neutral-sounding survey questions that will not prompt interviewees to answer one way or the other. Before they conduct their survey, students should write hypotheses to predict what their research will reveal. Then they can survey schoolmates and other peers. Have students write a few paragraphs to sum up their survey results.
- If possible, invite to class a teacher or lecturer who specializes in environmental education. Ask him or her to view this segment of *Tampering with Nature* and respond to it. After the viewing, students can ask the visitor questions that they have prepared in advance.

### Activities to accompany Chapter 2: Global Warming.

- Ask students to research the ongoing conflict between environmentalists and the logging industry. Ask students to find out what role the federal government plays in this conflict. Have them define the following terms related to forests and logging: old growth forests, clear cutting, tree farms, controlled burns, roadless



forests. Then they can discuss questions such as the following:

- Is it more important to preserve old growth forests or protect jobs that the logging industry creates?
  - Does logging threaten many plant and animal species, or do environmentalists exaggerate this claim in order to raise money?
  - Is planting tree farms an adequate method of replenishing older forests that the lumber industry cuts down?
8. Interested students may want to visit and evaluate Patrick Moore's website, Greenspirit <<http://www.greenspirit.com/home.cfm>>. Ask them to spend some time reading various articles on the site. Ask them to also read the following article from Wired magazine (posted on Moore's website, as well): "Eco-Traitor" by Drake Bennett, March 2004 <[http://www.wired.com/wired/archive/12.03/moore\\_pr.html](http://www.wired.com/wired/archive/12.03/moore_pr.html)>. Then lead a discussion in which students summarize the information they learned. Encourage them

to discuss their reactions to Moore's opinions and to the Wired article about him. Also ask them to read aloud passages from the website or article that they feel are especially interesting or surprising.

9. Have students do Internet and library research on the history of the global warming controversy and the IPCC (Intergovernmental Panel on Climate Change). Students can use their findings to create a timeline of important events, legislation, and scientific discoveries related to global warming. Sources might include:

- Global Warming by Kathiann M. Kowalski (Marshall Cavendish, 2003)
- Global Warming: Understanding the Debate by Kenneth Green (Enslow Publishers, 2002)
- the IPCC's website <<http://www.ipcc.ch/>>
- History of Global Warming from NOW with Bill Moyers on PBS <<http://www.pbs.org/now/science/climatechange.html>>

### Activities to accompany Chapter 3: The Good Old Days?

10. Stossel points out some unrealistic details concerning Native Americans in the film *Dances with Wolves*. Have students view this 1990 movie. Note that the film is rated PG-13. Have students write movie reviews that discuss whether the film seems realistic or overly romantic about Native Americans' lives in the past. Have them also consider the movie's plot, dialogue, casting (choice of actors to play various roles), music, editing (how the different scenes are pieced together), tone, and messages, as well as actors' performances. Ask them to research what life was like for Native Americans. Have students present their findings and discuss.



#### Activities to accompany Chapter 4: Genetically Engineered Food.

11. Have students research genetically engineered (also known as genetically modified, or GM) crops. Assign subtopics such as the following to individuals or pairs:

- how genetic engineering differs from cross-breeding methods of the past;
- kinds of GM crops widely cultivated today—such as corn, cotton, soybeans, canola, squash, and papaya—and how each is different from its natural form;
- how growing GM crops has affected food production in the U.S. and other countries;
- and reasons why opponents want to prevent farmers from growing GM crops.

Have researchers present their findings to the group as part of a roundtable discussion. At the end of the discussion, students might vote on the following question: Should we continue to grow and eat genetically modified crops, or should we wait until we better understand these crops' impact on consumers and the environment?

Possible sources include:

- *Debate over Genetically Engineered Foods: Healthy or Harmful?* by Kathiann M. Kowalski (Enslow Publishers, 2002)
- *Everything You Need to Know about Genetically Modified Foods* by Jeri Freedman (Rosen Publishing Group, 2003)
- *High-Tech Harvest: A Look at Genetically Engineered Foods* by Elizabeth L. Marshall (Scholastic, 1999)

- Website for PBS <[pbs.org](http://pbs.org)> Type “genetically modified food” or “genetically engineered food” in the Search box.
- Website for the Pew Initiative on Food and Biotechnology <<http://pewagbiotech.org/>>

#### Activities to accompany Chapter 5: Human Cloning/Summing Up.

12. John Stossel interviews author and magazine editor Virginia Postrel regarding human cloning and “designer kids.” Have interested students read *The Future and Its Enemies: The Growing Conflict Over Creativity, Enterprise, and Progress* by Virginia Postrel (available in paperback from Free Press, 1999). Have students hold a book talk in which they summarize the information they learned from the book and discuss their opinions and feelings about the issues that Postrel presents. Ask students to read aloud passages from the book that they feel are especially important, convincing, or unconvincing.

13. Have students discuss and debate the following questions: Is it wrong to create “designer kids”? What if some parents can afford to “custom design” their children, and others cannot? How might creating a “designer child” backfire?

14. Ask students to do research on eugenics. One possible source is <http://www.eugenicsarchive.org/>. American eugenics include Charles Davenport, Arthur Estabrook, and Francis Galton. Students might also research eugenics legislation in the U.S. and elsewhere. After they share their findings with classmates, students can discuss whether eugenics has anything in common with creating “designer kids.”

## Activities to accompany Chapter 6: Give Me a Break.

15. Have students read current and archived news stories on PETA and its members' activities. If necessary, show students how to search for news using Internet search engines such as *google.com*. Students can retell news stories to classmates. After discussing a PETA activity or statement, students might vote on whether it seems justified or too extreme.
16. Have students visit PETA's website <[peta.org](http://peta.org)> and that of the ASPCA (the American Society for the Prevention of Cruelty to Animals) <[aspc.org](http://aspc.org)>. After they peruse the two sites, have students write an essay comparing and contrasting the two organizations.

## Resources

If you have access to the Internet, here are some sources of information on issues that John Stossel discusses on the DVD:

### All About Earth Day

This website includes a history of Earth Day, a kids' page, and a "Teachers' Lounge."

< <http://earthday.wilderness.org/history/>>

### GeneWatch United Kingdom

According to its mission statement, "GeneWatch UK is a not-for-profit group that monitors developments in genetic technologies from a public interest, environmental protection and animal welfare perspective."

<<http://www.genewatch.org>>

### Greenpeace USA

<<http://www.greenpeaceusa.org/>>

### Pew Initiative on Food and Biotechnology

According to its mission statement, this organization "was established in 2001 to be an independent and objective source of credible information on agricultural biotechnology.... [The group] advocates neither for, nor against, agricultural biotechnology.... [It] is committed to providing information and encouraging debate and dialogue...."

<<http://pewagbiotech.org/>>

### Tampering with Nature—a Partial Transcript

[http://abcnews.go.com/sections/2020/2020/stossel\\_tamperingwnature020614.html](http://abcnews.go.com/sections/2020/2020/stossel_tamperingwnature020614.html).



## Activity #1: Response Chart

As you watch *Tampering with Nature*, use the second column of the chart to record your reactions to the information John Stossel reports, as well as the opinions and conclusions that he and others express. Also jot down any questions that come into your mind as you view the show.

Topic	Your Own Opinions, Feelings, and Questions
Link between education and kids' fears about our planet	
Global warming	
Genetically engineered food	
Cloning animals and humans	
PETA (People for the Ethical Treatment of Animals)	