

"Science, Ethics & Animal Experimentation"

OTHER TITLE OPTION:

"Animals in Laboratories"

GRADES: 8-College

TIME: 45-90 minutes

MINIMUM REQUIRED MATERIALS:

- *Video - Inside Biosearch, Unnecessary Fuss or Breaking Barriers*
- Enough Sweet 'n Lo packets for each person in audience
- Several *Lab Animal* magazines
- *Let's Visit a Research Laboratory and Thanks to Animal Research* posters
- White lab coat (suggested)

Part One: Teaching Critical Thinking

A. If you have a white lab coat, wear it into the classroom. Introduce yourself and your purpose, and then ask the students what impressions, feelings or thoughts they have about you based on how you're dressed. Ask them to think about what it means that a simple article of clothing might make them respect and believe you more than if you didn't wear the lab coat. Remove the lab coat, and then ask that the students *not* believe what you have to tell them, but rather think critically, and consider how they can find out for themselves whether what you're saying is true and valid or not. Remind them that you no more want them to believe you than someone who comes to their classroom in support of vivisection, rather you want them to learn how to find out the truth for themselves.

B. Explain that animal experimentation is the most complex of all animal issues because it is the only area of animal exploitation where the argument that we need to harm and kill animals for our health and well-being is made. Many people believe that vivisection is the one form of animal use that is a necessity. Explain that there are three issues to grapple with: whether it is ethical to experiment on animals (even if it would benefit us); whether it is the best way to advance healthcare and science; and whether it makes sense to use precious resource dollars for animal experimentation if the resources could better serve people in other ways.

C. Choose someone in the class (who appears to be a popular student) and ask his or her name (let's call her Sara). Ask the class "Do you think that it would be ethical to take Sara away from her family, confine her to a small cage, shock her, burn her, practice surgeries on her, force her to become a drug addict and go through withdrawal, poison her and then kill her even if it might benefit the rest of the class? When the students say "no," ask if it would be okay if Sara was a severely retarded orphan whom no one wanted. When the students say "no" again, ask them to consider then whether it would be all right to do this to a chimpanzee (with a family and more awareness and intelligence than the imaginary retarded child). Explain that while most animals used in experiments are not chimpanzees, you are asking them where and how to draw the line. Currently, there is no non-human animal who is protected from experimentation. **YOU ARE NOT THERE TO TELL THE STUDENTS HOW THEY SHOULD FEEL, OR WHAT THEY SHOULD BELIEVE, BUT RATHER TO RAISE THE QUESTIONS FOR THEIR CONSIDERATION.** Explain that until recently, African Americans and Native Americans have been used in experiments without their knowledge. (African Americans with syphilis were used for several decades, while Native

Americans were [and actually still are] subjected to radiation experiments and exposure.) Ask students why they think that these human experiments are wrong, and to think about why our government felt that these experiments were ethical. What has changed? Tell the students that you won't be discussing the ethical considerations of animal experimentation further, but are asking them to think about what they think is right and wrong to do, and to which species.

D. Tell the students that the rest of the presentation will concern whether or not animal experimentation is a good way to improve human health.

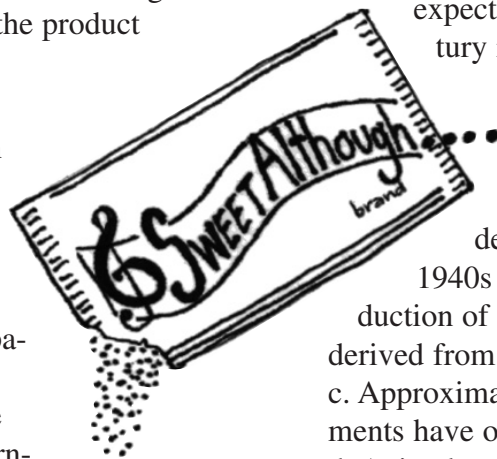
Part Two: Critical Thinking Activity - "Sweet 'n Lo" Exercise

A. Hand out Sweet 'n Lo packets to each person in the class, and ask the students to look at the package closely for anything that might be pertinent to the subject of animal experimentation. Ask students to raise their hands once they find something relevant. Also ask them if they have ever seen these packets. Where? Can they be found readily? By children? In what quantities?

B. Ask a student to read out loud what they found on their packet. (They will be reading the warning label that says that the product causes cancer in lab animals.)

C. Ask students what they learn about vivisection from the sweet 'n lo packet? (Some things they will likely say are:

- animal tests don't reliably predict human responses
- companies don't care about consumers
- products that harm animals are not kept off the market
- the warning is in tiny red ink and is difficult to read, implying that its message is unimportant and shouldn't be taken too seriously)



D. There are opportunities to raise many issues for critical thinking in this exercise. For example, you might discuss how readily available the product is; how animal tests are done not only for major medical problems but to test things like artificial sweeteners; how the tests are conducted; how the tests protect companies from lawsuits, rather than consumers, and what happens to the animals who are used to test saccharin, etc.

Part Three: Providing Information and Facts

A. Are we living longer because of vivisection?

1. If you have or can get the poster from the National Association for Biomedical Research, 818 Connecticut Ave., NW, Washington, DC (202) 857-0540, that reads: "Thanks to animal research, they'll be able to protest 20.8 years longer" and depicts "activists" protesting vivisection, it is useful to use it in the classroom. Hold this poster up, or describe it to the students. Ask the students how can they determine whether this is a true statement. Contrast this statement to the research of medical historians (see Robert Sharpe's *The Cruel Deception*) which point out the following:

- a. The primary reason for increased life expectancy since the turn of the century is the decline in infectious diseases, such as tuberculosis, small pox, scarlet fever and diphtheria.
- b. Approximately 90% of this decline occurred before the 1940s and 50s, and before the introduction of vaccines and treatments derived from vivisection.
- c. Approximately 95% of animal experiments have occurred since 1950.
- d. Animal experiments could account for *at most* 3% of increased life expectancy.

B. What diseases are killing people today?

1. Heart Disease #1

- a. Heart disease is 90% preventable but only a tiny portion of health dollars is used to teach prevention.
- b. Heart transplant surgeries, bypass operations, etc. will never put a dent in heart disease.
- c. Dr. Dean Ornish's work has demonstrated that a low-fat, vegetarian diet, coupled with stress reduction and exercise, reverses heart disease. This discovery and this treatment does not require vivisection, and is the only known cure for heart disease.

2. Cancer #2

- a. 75-90% of cancers are preventable through diet, and through avoiding smoking and carcinogenic environmental hazards.
- b. As with heart disease, cancer prevention is not promoted significantly.
- c. In 1971, the Nixon administration launched the War on Cancer, and since then, the U.S. has spent billions of dollars and killed millions of animals in this war.
- d. Harvard scientist, Dr. John Bailar, wrote in the *New England Journal of Medicine* that the War on Cancer was essentially a failure. In 98% of cancers there has been no increase in life expectancy, although doctors can now diagnose cancers earlier. (1988)
- e. The National Cancer Institute has begun moving away from some animal experiments in favor of non-animal methods because animal experiments have not been successful.
- f. A Pfizer pharmaceutical company study which tested substances for carcinogenicity among rats and mice found that 49% of the time the results were different between the two species of rodent.
- g. Vivisection may well be responsible for many cancer deaths. For many years scientists argued that smoking cigarettes did not

cause cancer because forcing animals to inhale tobacco did not cause cancer in these animals. These experiments delayed warnings about the dangers of smoking.

3. AIDS: while not a primary killer, it is of grave concern

- a. The major breakthrough in AIDS came from discovering its mode of transmission, and this was discovered through clinical observation, not through vivisection.
- b. Even chimpanzees, our closest relatives, under extremely stressful conditions and in confinement, rarely contract AIDS when inoculated with HIV.
- c. AIDS patients have had to sue the government for the right to try new treatments, not yet tested on animals. Even though these patients were dying, they were told they had to wait many years before they could try these new treatments. Eventually, these patients won their lawsuit and were able to test new treatments. This not only offered some hope to the AIDS patients, but results from these human trials are also applicable to human patients.

C. Drug Testing

1. All animals react differently to different substances. Aspirin poisons cats, while it is safe for most humans. Penicillin is fatal to guinea pigs.
2. The General Accounting Office of the government issued a report which looked at drugs released on the market between 1976-1985. Over half of the drugs that had been tested on animals caused side effects in people that required major relabeling or termination of the product. In some cases the animal-tested drugs caused blindness and death.
3. Dioxin is a potent carcinogen, and has been tested on virtually all animals used in laboratories. The results of four rodent

species follow. The lethal dose of dioxin in:
male rats: 23 mcg/kg
female rats: 45 mcg/kg
guinea pigs: 1 mcg/kg
hamsters: 5,000 mcg/kg

These numbers demonstrate the variance in species and remind us that these figures do not give us any indication of the lethal dose for another species of rodent let alone a human.

4. Alternative approaches to testing:

- a. Cell and organ cultures in which human cells are grown in petri dishes and test substances are placed on human cells.
- b. Mathematical and computer modeling.
- c. Careful clinical trials with people who are very sick and wish to try new treatments under strict supervision.
- d. Careful and thorough post-marketing surveillance to ensure that patients using new drugs are observed and followed.

D. Laws

1. There is no animal experiment in the U.S., no matter how cruel, irrelevant, or useless, which is against the law.
2. The Animal Welfare Act provides guidelines for cleanliness, cage size, etc. Although it covers all warm-blooded animals, rats, mice and birds have been excluded from the regulations which uphold the law. The AWA requires that painkillers and anesthesia be used as long as such use does not interfere with the experiment, and this decision is at the discretion of the vivisector. The AWA requires oversight committees at every research institution. These Institutional Animal Care and Use Committees (IACUCs)

review all grants, however, the committees make determinations based on majority, and most committee members are vivisectors and researchers, not members of the humane community. Lastly, the AWA requires site visits, half of which should be unannounced, however, most institutions are visited only half the number of times required by law, and with plenty of warning, enabling them to clean up the lab.

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Part Four: Video

There are several videos from which to choose that provide a glimpse into vivisection. They are upsetting and shocking, and should not be shown below the high school level.

- *Unnecessary Fuss*: excerpts from 60 hours of footage stolen from the University of Pennsylvania's head injury clinic. This footage was taken by the researchers themselves, and is shocking. As follow-up to the video, you can discuss the fall-out from its release. After a sit-in at the National Institutes of Health one year after the videotapes were taken from the lab, the researcher lost his funding. In 1990, however, he received millions more to resume his experiments, this time using pigs.

- *Breaking Barriers*: this film does not depict any actual experiments, rather it is film footage taken by ALF members who broke into a prestigious research center and taped the conditions under which the animals live. It is just as upsetting, however, to see the primates who have literally gone insane under such deprivation and mistreatment.

- *Inside Biosearch*: this film covers product testing only, and was videotaped undercover at a Philadelphia testing laboratory. An excellent film for introducing the subject of product testing and teaching about cruelty-free alternatives. It is also heartening to know that several of the companies mentioned in the film (e.g. Benetton and Revlon) have discontinued animal testing in favor of non-animal alternatives. (Can be shown to 7th and 8th grade.)

- *Classroom Cut-Ups*: this film covers an undercover investigation at the two largest biological supply companies in the United States. The video is pertinent to classroom dissection. It is very upsetting, but highly relevant to high school science students.

Be certain to process and discuss the video, sharing any changes that have occurred since the video, and allowing students to express their feelings. If there is someone they can write to to express their thoughts, provide that information, so they feel empowered to make their voices heard. Or, if there is something they can do directly (like buy cruelty-free products), let them know. Also, let them know about charities they can support which don't conduct animal experiments. Lastly, these videos are limited in their scope. Many students will wonder whether the films depict the norm, or are aberrations. It is important to share with students examples of different kinds of experiments, from psychology and drug addiction experiments in which animals are addicted to drugs or alcohol, or deprived of care, or abused, to military experiments, in which animals are subjected to explosives, nuclear radiation, biological weapons, etc.

Part Five: Critical Thinking Activity - *Lab Animal* magazine

Share copies of *Lab Animal* magazine with the students, and ask them to consider the mixed messages in the magazine and its advertisements. Questions to raise and consider: • Is animal experimentation a business? • Who benefits from this industry? • How are the animals depicted? • Is this confusing? *Lab Animal* magazine is available free of charge to teachers, doctors, veterinarians, technicians, researchers, etc. (See page 83 for ordering information.)

Part Six: Activity -

What to Do with a Million Dollars?

In this activity you are providing students with the opportunity to be on a committee that decides what projects get funding. Offer the students sample grant proposals and allow them to determine which proposals get funded, and with what amount of funds. Proposals should include the following (add more as you wish):

- Epidemiological study to determine the environmental and lifestyle factors which cause cancer
- Heart disease research in which new drugs are studied and developed to lower cholesterol
- Study to determine ways to teach and train patients to change their dietary and lifestyle habits to reverse their heart disease
- Study to test chemicals on various animal species to determine their toxicity
- Study to develop new testing procedures which don't use animals, but which use human cells
- Study to give non-human primates HIV for AIDS research
- Study to try new treatments on human AIDS patients
- Study to induce alcoholism in rats and seek a drug which will cure alcoholism
- Study to test chemical weapons on animals

Write the conclusions of the “committee” on the board and evaluate the differences between what the students chose, and what studies are generally funded by the government. (For example, Dr. Ornish was unable to procure government funds for his research studying the effects of diet, exercise, and relaxation on human heart disease patients, while the animal studies described above have all received funding. See also the sheet under “Resource Materials” which reports conclusions and costs of various animal experiments.)

Part Seven: Questions & Answers

This subject is complex and involved, and many students will have questions, particularly if another speaker has discussed a pro-vivisection perspective with them. Remember never to become defensive even if a question is hostile. Most people truly believe that vivisection saves human lives, and feel that you are arguing that a rat is more important than a human. This is never the situation, and such analogies simply suppress inquiry and discussion. Do not let yourself get caught up in such a debate, but rather use the suggested responses in the Question and Answer section of this workbook for ideas about how to respond to difficult questions.