Summary of Recommendations

1. Biology teachers should emphasize active, inquiry-based learning and engage their students in the doing of science.
2. Hands-on exercises should be pursued, but not at the expense of animal lives; countless ways exist for achieving exciting, engaging hands-on exercises for students (e.g., having students study themselves, and outdoor studies of animals and plants).
3. The time required to perform good-quality dissections should be used instead to make room for more pressing life science topics such as cell biology, molecular genetics, evolution, biochemistry, environmental science, and animal behavior.
4. Teacher training should be reformed so that exposure to alternatives is included and dissection of animals is not a training prerequisite for obtaining a science teaching license.
5. Students should be fully involved in ethical decision making in the classroom.
6. Conscientious objection should not be seen as rebelliousness aimed at disrupting a teacher’s efforts to teach, but rather, respected as evidence of concern and reflection.
7. Concern for animals should not be labeled as “squeamishness” but should be acknowledged as a legitimate manifestation of empathy for others. “Squeamish” students ought not be pressured or humiliated into participation in exercises they find distasteful.
8. Teachers and students should be made more aware of the connection between cruelty to animals and interpersonal violence; though mutilation of dissected specimens may only reflect a temporary desensitization, it should not be ignored as a possible sign that a student is prone to antisocial behavior.

9. Ethics should be part of the education of all children, and dissections should not be conducted in the absence of ethical discussion about the origins of the animals and the moral implications of using them.

10. Animal dissection should be eliminated from the precollege curriculum.

11. All procurement of animals for dissection should be from ethical sources, such as animal shelters, veterinary clinics, and wildlife rehabilitation facilities. Guardian-consent programs should be established so that cats (and other companion animals) who have died or been euthanized for medical or humane reasons can be donated from shelters or veterinary clinics to schools for educational use. These cadavers should replace the supply of cats from random sources, fetal pigs from slaughterhouses, frogs from wetlands, etc.

12. The United States Department of Agriculture (USDA), which is responsible for inspecting biological supply companies (classified by the USDA as “Class B Dealers”), should begin requiring biological supply companies to provide annual reports. These reports should include the numbers and species of animals killed and sold to schools for educational use, and the methods of capturing, transporting, handling, and killing the animals.

13. Biological supply companies should be required to conduct environmental impact assessments prior to collecting from wild animal populations.

14. Students should be informed of the specifics regarding the sources of animals used in the classroom, including methods used for capturing, transporting, handling, and killing the animals.

15. Dissection of species whose populations are known to be overexploited and/or in decline (e.g., leopard frogs, bullfrogs, spiny dogfish sharks) should be discontinued.

16. Students involved in dissections should be provided with gloves, masks, and safety instruction to minimize the hazards of exposure to formaldehyde.

17. Science teacher training should, without exception, include training in the use of computer simulations and other alternatives resources, including alternatives databases and loan programs.

18. School exercises that involve killing, undernourishing, or otherwise harming live animals should be replaced with humane alternatives, such as computer simulations, observational and behavioral field study, and benign investigations of the students themselves.

19. The traditional frog- and turtle-pithing exercises should be terminated and replaced with computer packages, which have been shown to save time and money without compromising educational value. Studies that involve the students as investigators and subjects should be more widely adopted.

20. Medical schools still using live terminal dog labs should follow the lead of other schools that have replaced these procedures with humane alternatives.

21. Veterinary schools should accelerate the current trend towards replacement of purpose-bred and/or healthy animals with clinical cases for surgical training, including spay/neuter of shelter animals.
Recognizing that perioperative experience, including handling live tissue, is a critical part of a veterinary education, student participation in actual clinical cases coupled with primary surgical experience performing procedures of benefit to the animal (e.g., spay/neuter of shelter animals) should wholly replace traditional “survival” surgeries. For common surgeries that are not medically required by an individual animal, only two options should exist: (1) terminal surgery on anesthetized terminally ill animals with guardian consent, or (2) cadaver surgery where cadavers are ethically obtained. All science fairs should abide by a policy against inflicting deliberate harm on sentient animals. Laws should be implemented that require a certain level of competency before a person is allowed to conduct animal experiments. All students should have a legally mandated right to use humane alternatives to dissection and other classroom exercises harmful to animals. Currently, fewer than one in five American states have statewide laws or policies mandating student choice in dissection. The result is that some students are granted rights denied to others. States still lacking such laws should make their enactment a high priority. Dissection choice laws should apply to students at all levels of education; currently, such laws apply only to precollege students and exclude post-secondary students even though the validity of conscientious objection is independent of learning level. IACUCs should apply more stringent restrictions on proposals for animal use in instruction and should always look for ways to piggyback teaching exercises that involve animals into ongoing research at the institution.