



## NSTA Position Statement

# Responsible Use of Live Animals and Dissection in the Science Classroom

### Introduction

NSTA supports the decision of science teachers and their school or school district to integrate live animals and dissection in the K–12 classroom. Student interaction with organisms is one of the most effective methods of achieving many of the goals outlined in the *National Science Education Standards (NSES)*. To this end, NSTA encourages educators and school officials to make informed decisions about the integration of animals in the science curriculum. NSTA opposes regulations or legislation that would eliminate an educator's decision-making role regarding dissection or would deny students the opportunity to learn through actual animal dissection.

NSTA encourages districts to ensure that animals are properly cared for and treated humanely, responsibly, and ethically. Ultimately, decisions to incorporate organisms in the classroom should balance the ethical and responsible care of animals with their educational value.

While this position statement is primarily focused on vertebrate animals, NSTA recognizes the importance of following similar ethical practices for all living organisms.

### Including Live Animals in the Classroom

NSTA supports including live animals as part of instruction in the K-12 science classroom because observing and working with animals firsthand can spark students' interest in science as well as a general respect for life while reinforcing key concepts as outlined in the *NSES*.

NSTA recommends that teachers

- Educate themselves about the safe and responsible use of animals in the classroom. Teachers should seek information from reputable sources and familiarize themselves with laws and regulations in their state.
- Become knowledgeable about the acquisition and care of animals appropriate to the species under study so that both students and the animals stay safe and healthy during all activities.
- Follow local, state, and national laws, policies, and regulations when live organisms, particularly native species, are included in the classroom.
- Integrate live animals into the science program based on sound curriculum and pedagogical decisions.

- Develop activities that promote observation and comparison skills that instill in students an appreciation for the value of life and the importance of caring for animals responsibly.
- Instruct students on safety precautions for handling live organisms and establish a plan for addressing such issues as allergies and fear of animals.
- Develop and implement a plan for future care or disposition of animals at the conclusion of the study as well as during school breaks and summer vacations.
- Espouse the importance of not conducting experimental procedures on animals if such procedures are likely to cause pain, induce nutritional deficiencies, or expose animals to parasites, hazardous/toxic chemicals, or radiation.
- Shelter animals when the classroom is being cleaned with chemical cleaners, sprayed with pesticides, and during other times when potentially harmful chemicals are being used.
- Refrain from releasing animals into a non-indigenous environment.

## **Dissection**

NSTA supports each teacher's decision to use animal dissection activities that help students

1. develop skills of observation and comparison,
2. discover the shared and unique structures and processes of specific organisms, and
3. develop a greater appreciation for the complexity of life.

It is essential that teachers establish specific and clear learning goals that enable them to appropriately plan and supervise the activities.

NSTA recognizes science educators as professionals. As such, they are in the best position to determine when to use—or not use—dissection activities. NSTA encourages teachers to be sensitive to students' views regarding dissection, and to be aware of students' beliefs and their right to make an informed decision about their participation. Teachers, especially those at the primary level, should be especially cognizant of students' ages and maturity levels when deciding whether to use animal dissection. Should a teacher feel that an alternative to dissection would be a better option for a student or group of students, it is important that the teacher select a meaningful alternative. NSTA is aware of the continuing development and improvement of these alternatives.

Finally, NSTA calls for more research to determine the effectiveness of animal dissection activities and alternatives and the extent to which these activities should be integrated into the science curriculum.

Regarding the use of dissection activities in school classrooms, NSTA recommends that science teachers

- Be prepared to present an alternative to dissection to students whose views or beliefs make this activity uncomfortable and difficult for them.
- Conduct laboratory and dissection activities with consideration and appreciation for the organism.

- Plan laboratory and dissection activities that are appropriate to the maturity level of the students.
- Use prepared specimens purchased from a reputable and reliable scientific supply company. An acceptable alternative source for fresh specimens (i.e., squid, chicken wings) would be an FDA-inspected facility such as a butcher shop, fish market, or supermarket. The use of salvaged specimens does not reflect safe practice.
- Conduct laboratory and dissection activities in a clean and organized work space with care and laboratory precision.
- Conduct dissections in an appropriate physical environment with the proper ventilation, lighting, furniture, and equipment, including hot water and soap for cleanup.
- Use personal safety protective equipment, such as gloves, chemical splash goggles, and aprons, all of which should be available and used by students, teachers, and visitors to the classroom.
- Address such issues as allergies and squeamishness about dealing with animal specimens.
- Ensure that the specimens are handled and disposed of properly.
- Ensure that sharp instruments, such as scissors, scalpels, and other tools, are used safely and appropriately.
- Base laboratory and dissection activities on carefully planned curriculum objectives.

—Adopted by the NSTA Board of Directors  
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## References

National Research Council. (1996). *National science education standards*. Washington, DC: National Academy Press.

## Additional Resources

Cross, Tina R. 2004. Scalpel or mouse: A statistical comparison of real and virtual frog dissections. *The American Biology Teacher*, 66(6): 408-411.

Institute of Laboratory Animal Resources, Commission on Life Sciences, National Research Council, National Academy of Sciences, National Academy of Engineering. 1989. *Principles and Guidelines for the Use of Animals in Precollege Education*. [dels.nas.edu/ilar/prin\\_guide.asp](http://dels.nas.edu/ilar/prin_guide.asp).

Kinzie, M. B., R. Strauss, and J. Foss. 1993. The effects of an interactive dissection simulation on the performance and achievement of high school students. *Journal of Research in Science Teaching* 30(8): 989-1000.

Kwan, T., and J. Texley. National Science Teachers Association. 2002. *Exploring safely; A guide for elementary teachers*. Arlington, VA: NSTA Press.

Kwan, T., and J. Texley. National Science Teachers Association. 2003. *Inquiring safely; A guide for middle school teachers*. Arlington, VA: NSTA Press.

Madrazo, G. 2002. The debate over dissection: Dissecting a classroom dilemma. *The Science Educator* (NSELA). EJ64162.

National Science Teachers Association. 2000. *Safety and School Science Instruction, an NSTA Position Statement*. [www.nsta.org/about/positions/safety.aspx](http://www.nsta.org/about/positions/safety.aspx).

Texley, J., T. Kwan, and J. Summers. National Science Teachers Association. 2004. *Investigating safely; A guide for high school teachers*. Arlington, VA: NSTA Press.