

NSELA Safety Position Statement
Code of Practice on the Use of Animals in Science Education

Introduction:

This code of practice is recommended by the National Science Education Leadership Association (NSELA) for use in elementary, middle/junior high and high school science/STEM classes. It applies to educational projects conducted and lessons taught involving live classroom pets (rabbits, hamsters, gerbils and guinea pigs or preserved organisms) in schools or in school-related activities such as science fairs, science clubs, and science competitions.

The purpose of the code of practice is to enrich education by encouraging students to observe living organisms and to learn proper respect for life. The study of living organisms is essential for any understanding of living processes. This study must be coupled with the observance of humane animal care and treatment. The science education leader needs to work with teachers to develop policies relative to the care and responsibility for animals in the classroom.

Statement:

The following components are strongly recommended for developing an effective policy statement on the use of animals in science/STEM education:

A. Care and Responsibility for Animals in the Classroom

1. Select live animals based on appropriate curriculum applications and pedagogical methodology.
2. Secure information from trustworthy sources to determine and apply appropriate federal, state and local laws and regulations, and school board of education policies relative to the responsible and safe use of animals in the science/STEM classroom.
3. Gather secure information on reputable and/or approved sources of animals to ensure humane conditions.
4. Acquire knowledge on care appropriate to the species being used including housing, food, exercise, and the appropriate placement of the animals at the conclusion of the study. Certification may be required to care for certain live animals. Check with your local division of Fish and Wildlife Services.
5. A veterinarian physical for the animal may be required by local or state law.

6. Assure that living animals entering the classroom are healthy and free of transmittable diseases or other problems that may endanger human health.
7. Foster appropriate handling of animals, while addressing issues such as allergies and fear of animals.
8. Maintenance of good health and provisions for optimal care based on an understanding of the life habits of each species used should be of primary importance. Animal quarters shall be spacious, shall avoid overcrowding, and shall be sanitary. Handling shall be gentle. Food shall be appropriate to the animal's normal diet and of sufficient quantity and balance to maintain a good standard of nutrition at all times. Clean drinking water shall always be available. Adequate provision for care shall be made at all times including holidays and vacation times.
9. Supervision should be required by a qualified adult who is knowledgeable about research methods, biology, care, and husbandry of the species being studied.
10. Plans should be made to control possible unwanted breeding of the species during the project period.
11. On rare occasions, it may be necessary to sacrifice an animal for educational purposes. This shall be done only in a manner accepted and approved by the American Veterinary Medical Association, by a person experienced in these techniques, and at the direction of the teacher with approval of the science supervisor.
12. Do not allow students to take the animals save extended closure for holidays, vacations, etc. Always make sure parents/guardians are aware and agree. Parents and students need to be trained on how to handle pets at home in a manner that is safer to the pet as well as those in the home.
13. Set up a feeding schedule for the custodial staff to follow when school is not in session. Post this for all to see so that the animals are not under- or over-fed.

B. Experimental Studies of Animals in the Classroom

1. If biological procedures involve living organisms, every effort should be made to use plants or invertebrate animals and/or simple life forms such as yeast and non-pathogenic bacteria.
2. Experimental procedures on vertebrate animals should be conducted with a strong respect for life. Procedures shall be effected without producing pain or discomfort to the animal, application of dietary deficiencies or exposure to hazardous chemicals, pathogens, or ionizing radiation.
3. Surgery on living animals should not be performed unless it is conducted in a proper surgical facility and by a licensed veterinarian.
4. Behavior studies should use only reward (such as providing food) and not punishment in training programs. Food should not be withheld for more than 12 hours.

C. Research Investigations Involving Vertebrate Animals

Exceptionally talented students may wish to conduct research. The following procedures should be recommended:

1. Students wishing to enter their research into science competitions should ensure that research on vertebrate animals is permissible before they begin their project.
2. Protocols of extracurricular projects involving animals should be reviewed in advance of the start of the work by a qualified adult supervisor.
3. Preferably, extracurricular projects should be carried out in an approved area of the school or in a cooperative college/university research facility. Under careful and safer supervision.
4. The project should be carried out with the utmost regard for the humane care and treatment of the animals involved.
5. If bird embryos are subjected to invasive or potentially damaging experimental manipulation, the embryo must be destroyed three days prior to hatching. If normal embryos are hatched, provisions must be made for their care and maintenance.
6. An IRB (Internal Review Board) process should be established within the institution. Any student wishing to conduct animal research should go through the IRB process and receive approval before conducting the experiment.

D. Dissections

Dissection, as an instructional strategy, is discouraged in science/STEM classes.

1. Behavioral studies of live animals are encouraged when appropriate as an alternative to dissection. Additional alternatives to dissection may be addressed via models, computer representations, display specimens and other resources.
2. In advanced classes, when dissection is determined to be the most effective activity to meet specific and clearly designed learning objectives, preserved vertebrate specimens are recommended.
3. Teachers should ensure that specimens are studied respectfully and completely to warrant the dissection.
4. Use reputable and reliable scientific supply vendors for prepared specimens and/or fresh specimens from an FDA-inspected facility (e.g., fish market, supermarket or butcher shop). "Road kills" or other salvaged specimens do not meet prudent safety practice and should not to be used.

5. Dissections are to be conducted in an appropriate learning environment with proper engineering controls (appropriate ventilation, etc.), administrative procedures and personal protective equipment (indirectly vented chemical splash goggles, non-latex gloves and aprons, etc.).
6. Ensure that appropriate dissection equipment is used safely and by design.
7. Establish and follow procedures for appropriate handling and disposal of specimens.
8. Parents and students should be notified in writing if dissections are planned in advance.
9. Local policy should provide alternatives for students who have conscientious objections to dissection.

Conclusion:

Care and responsibility for animals in the classroom is an important hands-on curriculum component of life science education provided it is done under the appropriate safety protocols.

References:

- [Classroom Pets: Safely Caring for Animals in the Classroom](#)
- [Responsible Use of Live Animals and Dissection in the Science Classroom, NSTA Position Statement](#)

Credits:

The NSELA Board of Directors wishes to sincerely thank the following individuals for developing this NSELA position statement:

Dr. Kenneth Roy, NSELA Safety Compliance Officer, Former President and Executive Director, NSTA Chief Safety Compliance Adviser, CSSS Associate member, NFPA member, ICASE Safety Committee Member, Director of Environmental Health & Safety, Glastonbury Public Schools, CT.

Dr. Kevin Doyle, NSELA member, NSTA Safety Advisory Board Member, District Supervisor of Science, Morris Hills Regional District, Rockaway, NJ, Former President NJSELA.

Dr. Mary Loesing, NSELA Region A Director, NSTA Safety Advisory Board Member, New York State Science Education Consortium Co-Facilitator, NYSASCD President, LIASCD Past President, LISTEMELA Past President