



ADMINISTRATIVE PROCEDURE

ANIMALS IN THE SCHOOL SETTING

6131

Procedure No.

July 1, 2019

Date

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- I. **PURPOSE:** To clarify the procedures for having both vertebrate and invertebrate animals in the classroom and to set standards for alternatives to dissections by students.
- II. **DEFINITIONS:**
- A. Animal: The use of the word “animal” in this administrative procedure unless otherwise stated refers primarily to members of the phyla Vertebrata (animals with bones) and Invertebrata (animals without bones) to include insects, worms, and mollusks.
- B. Venomous (poisonous) animal: This includes but is not limited to: rattlesnakes, copperheads, water moccasins, coral snakes, gila monsters, black widow spiders, brown recluse spiders, bees, wasps, hornets, lionfish, stinging jellyfish, scorpions, and tarantulas.
- C. Wild mammal: "wild mammal" means any mammal, which is not a domestic or captive animal within the meaning of the Protection of Animals Act (1911). These include but are not limited to: bats, skunks, raccoons, foxes, minks, weasels, ferrets, opossums, un-owned or unvaccinated dogs or cats, ground squirrels, mice, rats, chipmunks, groundhogs, moles, and shrews.
- D. Vertebrate animals are defined as:
1. Live, nonhuman vertebrate mammalian embryos or fetuses;
 2. Tadpoles;
 3. Bird and reptile eggs within three days (72 hours) of hatching; and
 4. All other nonhuman vertebrates (including fish) at hatching or birth.
- III. **PROCEDURES:**
- A. Elementary K-5: In elementary schools live animals should be used in the classroom only for observational studies leading to the appreciation and understanding of the characteristics of various life forms, diversity of the Animal Kingdom and connections to the Next Generation of Science Standards (NGSS) and the written curriculum.
1. Teachers and students should consider studying plants, non-harmful bacteria, fungi, protozoa worms, snails, insects and other invertebrates, farm animals, and zoo animals.



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2. Whenever possible, animals should be observed in their natural habitat or observing animals outside of the classroom: schoolyard walks, William S. Schmidt Outdoor Education Center, Howard B. Owens Science Center, outdoor field trip, petting zoo, etc.
 3. Teachers could plan lessons, which involve students in the study of animal systems' structure and function, such as:
 - a. Communication;
 - b. Genetics;
 - c. Special senses;
 - d. Metabolism;
 - e. Activity cycles;
 - f. Learning processes;
 - g. Reproduction;
 - h. Growth;
 - i. Behavior; and
 - j. Interrelationships of organisms.
- B. Secondary 6-12: In secondary school science programs, live animals may be used for observational studies as outlined in Section A and also for experimental studies according to the following guidelines:
1. In biological procedures involving living organisms, species of plants, bacteria, fungi, protozoa, worms, snails, insects, and other invertebrate animals should be used whenever possible.
 2. Some sample plant, protozoan, and/or invertebrate projects include: field studies and natural history (life cycle, incidence in nature, social structure, etc.); germination, genetics; reproduction; effect of light; temperature, other environmental factors, and hormones on growth and development; feeding behavior; nutritional requirements; circulation of nutrients to tissues; metabolism; water balance; excretion; movement; activity cycles and biological clocks; responses to gravity and light; perception to touch, humidity, and vibration; habitation, communication; pheromones; observations of food chains and interdependence of one species on another.
 3. No experimental procedures shall be attempted on mammals, birds, reptiles, amphibians, or fish that cause the animal pain or distinct discomfort, or that interfere with its health. According to the Society for Science and the Public (2019), a science project is considered a tissue study and not a vertebrate animal study if tissue



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is obtained from an animal that was euthanized for a purpose other than the student's project.

4. In tissue studies, a student may observe the vertebrate study, but may not manipulate or have any direct involvement in the vertebrate animal experimental procedures. Neither teachers nor students shall perform dissections on live vertebrate animals. (Use of tissues obtained from research conducted at a Regulated Research Institution requires a copy of an Institutional Animal Care and Use Committee [IACUC] certification with the name of the research institution, the title of the study, the IACUC approval number and date of IACUC approval.)
5. Experimental procedures involving vertebrate animals include the following:
 - a. Examples of non-painful, hazardous projects on some vertebrate species (including, in some instances, human beings) include some already mentioned under item (2) and also: group behavior; normal growth and development, properties of hair, pulse rate, and blood pressure; various normal animal behaviors such as grooming; reaction to novelty or alarm; nervous reflexes and conditioned responses; special senses (touch, hearing, smell, and proprioceptive responses); and respiration.
 - b. Experimental procedures shall not involve use of microorganisms which can cause disease in humans or animals, ionizing radiation, cancer-producing agents, or administration of alcohol or other harmful drugs or chemicals known to produce toxic or painful reactions or capable of producing birth defects. According to the Society for Science and the Public (2019), students are prohibited from designing or participating in an experiment associated with the following types of studies on vertebrate animals:
 1. Induced toxicity studies with known toxic substances that could cause pain, distress, or death, including but not limited to, alcohol, acid rain, pesticides, or heavy metals or studies with the intent to study toxic effects of a substance on a vertebrate animal.



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2. Behavioral experiments using conditioning with aversive stimuli, mother/infant separation or induced helplessness.
 3. Studies of pain.
 4. Predator/vertebrate prey experiments.
- c. Behavioral studies should use only reward (such as providing food) and not punishment (such as electric shock) in training programs. Food, when used as reward, shall not be withdrawn for periods of longer than 12 hours. According to the Society for Science and the Public (2019), justification is required for an experimental design that involves food or fluid restriction and must be appropriate to the species.

If the restriction exceeds 18 hours, the project must be reviewed and approved by an IACUC and conducted at a regulated research institution. The local or affiliated fair Scientific Review Committee (SRC) serves in this capacity for vertebrate animals studies performed in a school, home or field. Any SRC serving in this capacity must include a veterinarian or an animal care provider with training and/or experience in the species being studied.

- d. Diets deficient in essential nutrients are prohibited.
- e. If bird embryos are subjected to invasive experimental manipulations, the embryo must be destroyed humanely two days prior to hatching. If normal embryos are to be hatched, satisfactory humane provisions must be made for the care of the young birds.
- f. Science fair or other research projects involving animals should be reviewed and approved in advance of the start of work by a qualified adult supervisor (teacher, parent scientist, others). Extracurricular vertebrate projects should be conducted in a suitable area in the school or scientist's laboratory, but not in the student's home.



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- g. High school students who participate in internship positions at research institutions are also expected to follow the above experimental procedures.
 - h. Any laboratory-bred science projects involving vertebrates should be conducted in approved regulated science institutions under the supervision of a qualified scientist. Such offspring resulting from this breeding experiment should not be released into the wild, since they may disturb the normal ecosystem or become pests. Additionally, animals may not be captured from or released into the wild without approval of authorized wildlife or other regulatory officials.

All appropriate methods and precautions must be used to decrease stress. Fish may be obtained from the wild only if the researcher releases the fish unharmed, has the proper license, and adheres to state, local and national fishing laws and regulations. The use of electrofishing is permissible only if conducted by a trained supervisor; students are prohibited from performing electrofishing.
 - i. No animal or animal products from recognized endangered species should be kept and displayed.
6. Prohibited Animals: Since some animals present a high risk of infection or injury to humans, the animals listed below are prohibited in the classrooms or laboratories of the Prince George's County Public Schools (PGCPS).
- A. Any venomous (poisonous) animal.
 - B. Any wild animal species that presents a high risk of carrying rabies, Lyme disease or causing injury.
 - C. Any species of sub-human primate including, but not limited, to apes, monkeys, marmosets, and lemurs, because of the capability of inflicting severe injury and of carrying a wide variety of simian viruses.
 - D. Any turtle less than four inches of length, because of the possibility of Salmonella infection. All reptiles (turtles, snakes, lizards, etc.) have the potential to carry salmonella. Proper hand washing after handling any reptiles is required. Students who are prone to putting



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- their fingers in their mouths before hand washing, such as kindergartners and special needs students, should not handle reptiles.
- E. Any wild rodent because of the possibility of carrying fleas and ticks which may transmit serious bacterial or rickettsial infection.
 - F. Any wild (non-domestic) rabbit or hare because of the possibility of transmitting the bacterial disease Tularemia (rabbit fever) to humans.
 - G. Any animal that may cause an allergic (i.e. skin or respiratory) reaction to a student assigned continuously to that classroom. (Check with school Health Aide.)
 - H. Exceptions to these prohibited animal procedures may be made only for components of specialized programs at the Howard B. Owens Science Center and the William S. Schmidt Outdoor Education Center, and the Environmental Science Academies in PGCPS. An exception must have approval from the appropriate supervisor.
7. Live Animal Care and Safety Factors in the School Setting: When using animals not included on the previous prohibited list, it is the responsibility of the teacher to seek the approval of the principal prior to bringing animals into the classroom.
- A. Preparations should include acquisition of knowledge on care appropriate for that species, as well as housing and other equipment needs, food, and planning for care of the living creatures after completion of study.
 - B. The purpose of having an animal in the school setting is to enhance the learning process for students. The teacher has the responsibility to:
 - 1. Ensure that the animal is obtained from a qualified animal distributor, licensed pet shop, or breeder.
 - 2. Provide a safe and healthful area to maintain the animal in the classroom.



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3. Ensure that the adult/teacher caring for the animal knows how to properly feed, water, and handle the animal.
4. Maintain a latched or locked cage for the animal, as appropriate.
5. Ensure that the animal is properly immunized including a current rabies vaccination, as appropriate.
6. Monitor daytime and nighttime classroom temperatures as appropriate for specific animals.
7. Design a plan for animal care over weekends, holidays, and on those days when schools are not in session.
8. Develop a plan for care of the animals in the event the regular caregiver is not on duty or during emergency school closing.
9. Verify that the animal is certified by the vendor to be free of lymphocytic choriomeningitis (LCM). LCM is an uncommon but potentially serious viral disease transmitted to humans by infected guinea pigs, hamsters, and mice.

IV. **INFORMATION: Use of Dead Animals**

- A. Wild mammals recently killed by motor vehicle often referred to as “road kill” are inappropriate for use in the classroom.
- B. Fresh fish or butchered meats (such as beef-heart, brain, or stomach; pig intestines, etc.) should be placed in a preserving solution or placed on ice until used for classroom instruction.
- C. Preserved animals purchased from an educational supply source should be kept in sealed containers until ready to use.

V. **PERSONAL HEALTH BEHAVIORS WHEN CARING FOR ANIMALS:**

Below are some necessary precautions when caring for animals:

- A. Wash hands and exposed areas with hot water and soap immediately after handling or feeding animals and after cleaning cages.
- B. Avoid hand-to-mouth contact when handling animals or cages.



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- C. Clean and disinfect cages as appropriate to the animals' requirements to ensure clean and odor-free cages.
- D. Dispose of feces and bedding in a sanitary manner by sealing in plastic bag and placing in a dumpster for removal to sanitary landfill.
- E. Do not place animals, animal feed, or cages in areas where food for human consumption is stored, prepared, or consumed
- F. Keep all animal food in rodent resistant containers.
- G. Report any bite, scratch, or equipment-inflicted injury of a student including allergies or illness to the health aide and principal at once.
- H. Clean thick gloves and appropriate clothing are recommended when handling animals to prevent bites or scratches.

VI. **SAFETY ASPECTS FOR ANIMALS IN THE SCHOOLS:**

- A. Cages
 - 1. Cages should be constructed of ¼ inch metal mesh (hardware cloth) to prevent finger insertion.
 - 2. Students should not place bare hands into cages.
 - 3. Keep cages clean of wastes.
 - 4. Cages and paraphernalia should be sterilized before and after use, and frequently during use. Use 5% sodium hypochlorite (Clorox) or Lysol. Rinse cage thoroughly with tap water.

- B. Aquaria and Terraria

Careful cleaning is essential so that organic materials do not act as a reservoir for microorganisms. Remove mineral accumulation with a vinegar solution and rinse. Glass aquaria or terraria should be stored on safe and secure stands, lab tables, or shelves.

- C. Insect Collections



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A preservation jar for insects can be prepared by taping a swab of cotton moistened with ethyl acetate, acetone, or fingernail polish remover into the lid. Potassium cyanide is not permitted.

D. Chick Embryos and Baby Chicks

1. In producing embryos for study, no embryo developed more than 18 days should be used. If chick eggs are to be hatched, the teacher must abide by Maryland Law described in item 4 below.
2. Do not work with virus-injected eggs.
3. Dispose of dead embryos because of the possibility of the presence of pathogenic bacteria.
4. In the state of Maryland it is unlawful for any person, firm, or corporation to sell, offer for sale, barter, or give away baby chickens, ducklings, or other fowl, (under three weeks of age) as pets, toys, premiums or novelties or to color, dye, stain, or otherwise change the natural color of the baby chickens, ducklings, or other fowl.

E. Develop a fire evacuation procedure for the animals kept in the building.

VII. **ALTERNATIVES TO ANIMAL DISSECTION:**

- A. Students may be given appropriate alternative assignments for activities involving the dissection of live and dead animals. It is recommended that science teachers carefully consider alternative ways to achieve the objectives of teaching about the biology of organisms. These objectives should include the following:
1. Establishment of an understanding of the organism and its role in the environment.
 2. Respect and appreciation for living things.
 3. Humane treatment of animals.
 4. Strict consideration for the safety and welfare of students and teachers.
 5. Sensitivity to others' value conflicts.



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- B. Under no condition is the student who requests alternative activities to be penalized. Assessment, evaluation, or testing on the material/objectives covered shall also be provided by alternative methods.
- C. If a student chooses not to participate in activities with animals, alternate and comparable assignments are to be given to the student. Some alternative activities could include:
1. Computer simulations;
 2. Virtual dissections;
 3. Live observations;
 4. Models; or
 5. Any tool as determined by the teacher.
- D. Science teachers of courses where animals are utilized for study shall:
1. Inform the student in writing at the beginning of a course that uses animals (living or dead) for dissection during the course.
 2. Provide alternative educational activities for students whose parents request it in writing. Requests must be made to the school's principal at least one week prior to the activity.
- VIII. **MONITORING AND COMPLIANCE:** Principals will review this procedure with their Science Teacher Coordinators or Department Chairpersons and will ensure this procedure is being followed by all teachers who are teaching science content grades Pre-Kindergarten to 12.
- IX. **RELATED PROCEDURES:** None.
- X. **MAINTENANCE AND UPDATE OF THESE PROCEDURES:** This procedure originates with the Division of Academics, Science Office, and will be updated as necessary.
- XI. **CANCELLATIONS AND SUPERSEDURES:** This Administrative Procedure cancels and supersedes Administrative Procedure 6131 dated July 1, 1991.
- XII. **EFFECTIVE DATE:** July 1, 2019.