

Instructions for Research Plans Concerning Vertebrates

The ISEF Research Plan Attachment (a guide for writing your research plan) asks for a description of methods and procedures. Projects that involve vertebrate animals require an **extremely detailed** Research Plan for SRC/ACUC (Animal Care & Use Committee) review purposes. Although most of the following information is required on Non-Human Vertebrate Animal Form (5a and 5b), the SRC/ACUC requires a comprehensive Research Plan detailing ALL of the specifics listed below. See Form 5A or 5B and ISEF's "Rules and Regulations for Pre-College Research" on the website, <http://stemed.unm.edu> for further details.

Checklist for Projects Involving Vertebrate Animals – In addition to the normal information a research plan must contain, plans for projects involving vertebrate animals must also address the following points directly or by clearly indicating that they do not apply to the project. It is recommended that you address the issues in the order listed below to avoid any mistakes in verification.

- 1) Justify why animals must be used, including the reasons for the choice of species and the number of animals to be used.
- 2) Describe any alternatives to animal use that were considered, and the reasons these alternatives were unacceptable.
- 3) Explain the potential impact or contribution this research may have on the broad fields of biology or medicine.
- 4) Describe, in detail, how the animals will be used. Include methods and procedures, such as experimental design and data analysis.
- 5) Identify the species, strain, sex, age, weight, source and number of animals proposed for use.
- 6) Provide detailed information on the animal's housing, husbandry (daily care, feeding, etc.), and environment.
- 7) Provide information on the veterinary medical/nursing care, to be obtained in the case of illness or emergency. Unless you are doing a purely "observation-only" project, please plan to get a veterinarian's signature in the appropriate box on the bottom of Form 5A/5B.
- 8) Describe the procedures that will minimize the potential for discomfort, distress, pain and injury to the animals during the course of experimentation. **Experiments involving more than momentary pain or distress are strictly PROHIBITED for middle & high school student research projects.**
- 9) Describe any analgesic, anesthetic, tranquilizing or other drugs, or other substances (show dosage in mg/kg of body weight) and comfortable restraining devices used to minimize discomfort, distress, pain, and injury.
- 10) Explain what will happen to the animal(s) after the project is finished.
- 11) If euthanasia will be performed by a Qualified Scientist (*students are not permitted to perform euthanasia except in an emergency*), describe the method and reason for selection. Methods must comply with the Euthanasia Guidelines in the 2000 AVMA report.