

Los Angeles County Science Fair
SRC Project Review Sheet- JUNIOR DIVISION
CHECKLIST: Tissue, Cell Lines, Organs or Organ Parts

JR

Student's Name _____

School _____

Site Coordinator _____

Check any MISSING information in blank spaces on the LEFT: if desired, add a "tick" mark in pencil on the right to indicate completion

A. RESEARCH PLAN- Pg. 13

- ___ 1. **Objective**
- ___ 2. **Problem**
- ___ 3. **Hypothesis**
- ___ 4. **Type** of tissue/cell line, organ and/or organ parts
- ___ 5. The **SOURCE** for the tissue/cell line, organ and/or organ parts
- ___ 6. **How** will the tissue/cell line, organ and/or organ parts **be collected?**
- ___ 7. **Location** of experimentation
- ___ 8. **Reason** student requires these tissues for their project
- ___ 9. List **Bibliographic References** (a minimum of 3 references, not exclusively Internet).

B. PROCEDURE/RESEARCH TECHNIQUES (or additional page(s))

- ___ 10. Provides a **clear and detailed** description of specific institutional safety procedures for management of materials and protection of students used by student(s).
- ___ 11. Provides a **clear and detailed** description of specific institutional safety procedures for management of materials and protection of students used by adult(s).
- ___ 12. Intended disposal of bio-hazardous materials and/or tissue. Specify institutional procedures for management of materials (Protocol # is not sufficient).

C. RESEARCH INVOLVING TISSUES- Pg. 13 (Check areas of non-compliance)

- ___ 13. Human blood/blood products/other bodily fluids is (are) documented as free of AIDS, Hepatitis or other pathogenic agents.
- ___ 14. Human/vertebrate tissues will be obtained from an appropriate institute or Biomedical Scientist.
- ___ 15. Student will **NOT** be directly involved in the acquisition of tissues.
- ___ 16. Experimental procedures involve a Biomedical Scientist or Designated Adult Supervisor.
- ___ 17. Experimental procedures will be **NOT** conducted in a home environment.
- ___ 18. All bodily fluids will be treated in the same manner as pathogenic or potentially pathogenic agents.
- ___ 19. For projects conducted at a research facility, student will follow standard tissue, cell line, organ or organ parts research practices as defined in **Biosafety in Microbial and Biomedical Laboratories (BMBL) published by CDC-NIH.**
- ___ 20. Procedure includes the sterilizing of materials at the end of the experiment.

D. REQUIRED SIGNATURES (Pg. 14- Check any missing signatures)

- ___ 1. Student (required for all projects)
- ___ 2. Teacher/Advisor (required for all projects)
- ___ 3. Biomedical Scientist (required for all projects involving tissues and vertebrate animals)
- ___ 4. Certification by Person Providing Tissue/Cell Line Sample (required for projects involving tissue/cell lines samples)
- ___ 5. Designated Adult Supervisor (required for all projects involving tissue, cell lines, organs or organ parts; usually the Site Science Fair Coordinator)

**Los Angeles County Science Fair
SRC Project Review Sheet- JUNIOR DIVISION
CHECKLIST: HUMAN SUBJECT RESEARCH**

JR

Student's Name _____

School _____

Site Coordinator _____

Check any MISSING information in blank spaces on the LEFT: if desired, add a "tick" mark in pencil on the right to indicate completion

A. HUMAN SUBJECT RESEARCH PLAN AND CONSENT FORM

- ___ 1. **Objective**
- ___ 2. **Problem**
- ___ 3. **Hypothesis**
- ___ 4. **Procedures** give detailed specifics of what the subject is being asked to do in the Consent form and Research Plan
- ___ 5. **Time** required for participation is addressed in the Consent form
- ___ 6. **Risks** to Human Subjects are detailed and Safety measures addressed
- ___ 7. **Benefits** to the Human Subjects for participating are detailed
- ___ 8. **Confidentiality** will be maintained
- ___ 9. **List Bibliographic References** (a minimum of 3 references, not exclusively Internet).

B. RESEARCH INVOLVING HUMAN SUBJECTS (Check areas of non-compliance)

- ___ 7. Student Researcher has minimized the physical/psychological risk to the human subject(s) in Research Plan Procedures.
- ___ 8. Student Researcher has considered risks related to invasion of privacy and possible breach of confidentiality.
- ___ 9. Student Researcher's will NOT publish or display information in a report that identifies the human subject(s) directly or in photos linked to the subject(s), without written consent
- ___ 10. Student Researcher plans to obtain information on human subjects from the Internet and will maintain appropriate confidentiality and obtain informed consent when appropriate.
- ___ 11. Student Researcher plans to observe and collect data for analysis of medical procedures medication administration and has the written consent of qualified professionals in their Research Plan.
- ___ 12. Student Researcher is NOT planning to administer medication, beverages or food products and/or perform medical procedures.
- ___ 13. Written consent from human subject(s) over the age of 18 has been waived.
- ___ 14. Human subject(s) will NOT be involved in an abnormal educational practice.
- ___ 15. Human subject(s) will NOT be involved in research involving illegal public behavior.
- ___ 16. Human subject(s) will NOT be involved in research which intends to manipulate the subject(s) behavior and poses a significant risk.
- ___ 17. Surveys and questionnaires being used by Student Researcher has informed, written consent and does NOT violate human subject privacy or pose potential emotional distress.
- ___ 18. Human subject(s) will NOT be involved in a physical activity far greater than that ordinarily encountered in daily life, which may pose harm or discomfort to the subject(s).

C. REQUIRED SIGNATURES (Check any missing signatures)

- ___ 1. Student (required for all projects)
- ___ 2. Parental/Guardian Permission (***Page 1 of Human Research Plan, at bottom of Information Data Table***)
- ___ 3. Teacher/Advisor (required for all projects)
- ___ 4. Biomedical Scientist (***only required for projects done at a research facility***)
- ___ 5. Designated Adult Supervisor (required for all projects involving humans; usually the Site Science Fair Coordinator)

Los Angeles County Science Fair
SRC Project Review Sheet- JUNIOR DIVISION
CHECKLIST: VERTEBRATE ANIMALS

JR

Student's Name _____

School _____

Site Coordinator _____

Check any ***MISSING INFORMATION*** in blank spaces on the LEFT: if desired, add a "tick" mark in pencil on the right to indicate completion

A. RESEARCH PLAN

- ____ 1. Objective
- ____ 2. Problem
- ____ 3. Hypothesis
- ____ 4. Type of vertebrates, species, age and number of animals (*note small sample size but do not reject project*)
- ____ 5. Intended disposal of vertebrate animals (including post-research homes for live animals). Specify institutional procedures for management of animals.
- ____ 6. Cite evidence of search for alternative to vertebrate animal use.
- ____ 7. List Bibliographic References (a minimum of 3 references, not exclusively Internet).

B. PROCEDURE/RESEARCH TECHNIQUES (See "*Guidelines For Vertebrate Research And Safety Precautions*")

- ____ 8. Provides a **clear and detailed** description of proposed procedure, including equipment to be used, safety measures, description of humane treatment of vertebrate animals.

C. RESEARCH INVOLVING VERTEBRATES (Check areas of non-compliance)

- ____ 9. Live or preserved animals will be acquired from an approved source and their care and use will be in compliance with local, state, and Federal laws.
- ____ 10. Student will **NOT** be involved in the sacrifice or euthanasia of a living vertebrate.
- ____ 11. Student will NOT induce pain, *for whatever reason*, to a vertebrate animal.
- ____ 12. Experiments involving **stress** will follow the guidelines for "Humane Treatment of Animals," [CA Education Code Title 2, Division 2, Part 28, Chapter 4, Article 5, 51540](#), stay within normal stress limits for the species and NOT produce pathological lesions (diseased patches or cancers.)
- ____ 13. Any proposed experimental medication of animals will be done **ONLY** with appropriate adult supervision (this includes, but is not limited to: OTC & prescription drugs, pain killers, anesthetics, sedatives, vitamins, caffeine, alcohol, and smoke from tobacco products).
- ____ 14. Student WILL NOT plan to withhold adequate food, water, or living space. Comfort is a prime concern.

D. REQUIRED SIGNATURES (Check any missing signatures)

- ____ 1. **Student** (required for all projects)
- ____ 2. **Teacher/Advisor** (required for all projects)
- ____ 3. **Biomedical Scientist** (required for all projects involving vertebrate animals)
- ____ 4. **Certification by Animal Care Supervisor** (required for all vertebrate animal projects)
- ____ 5. **Designated Adult Supervisor** (required for all projects involving vertebrate animals; usually the Site Science Fair Coordinator)

Los Angeles County Science Fair
SRC Project Review Sheet- JUNIOR DIVISION
CHECKLIST: HAZARDOUS MATERIALS/ACTIVITIES/DEVICES

JR

Student's Name _____

School _____

Site Coordinator _____

Check any MISSING information in blank spaces on the LEFT: if desired, add a "tick" mark in pencil on the right to indicate completion

A. RESEARCH PLAN (Check areas of non-compliance)

- ____ 1. Objective
- ____ 2. Problem
- ____ 3. Hypothesis
- ____ 4. List of chemicals and/or devices to be used in the procedure, their source and/or location of sampling
- ____ 5. Location of experimentation
- ____ 6. Bibliographic References (a minimum of 3 references, not exclusively Internet).

B. PROCEDURE/RESEARCH TECHNIQUES (or additional page(s))

- ____ 7. Provides a **clear and detailed** description/outline of proposed procedure, including equipment to be used, safety measures, and disposal of hazardous chemicals, activities and/or devices.
- ____ 8. Identify and assess the risks involved to humans and/or the environment for ALL hazards
- ____ 9. Describe the disposal procedures for hazardous chemicals or devices that will be used (in accordance with **MSDS sheets**).

C. SAFETY PRECAUTIONS (See "*Guidelines For Hazardous Materials Research And Safety Precautions*)

- ____ 10. List the source(s) of safety information.
- ____ 11. Hazardous Chemicals were obtained from an appropriate Science Supply Store, College, Scientific Institution or Biomedical Scientist.
- ____ 12. If research is conducted in a school laboratory setting, standard safety precautions for handling hazardous chemicals or devices will be followed, as outlined in the *Science Safety Handbook for California Schools (2012.)*
- ____ 13. Student will NOT directly buy or acquire hazardous chemicals themselves.
- ____ 14. All experimental procedures will involve a Biomedical Scientist or Designated Adult Supervisor.
- ____ 15. Only a qualified Biomedical Scientist or Adult Supervisor trained in the standards for their use will handle especially hazardous chemicals.
- ____ 16. Experimental procedures using hazardous chemicals will **NOT** be conducted at home.
- ____ 17. Student will use approved goggles, gloves and lab aprons when performing activities hazardous to the eyes or skin.
- ____ 18. Eyes and skin will not be exposed to ultraviolet light experimentally or accidentally as part of the project.
- ____ 19. Student will NOT use or handle ethidium bromide or gels stained with ethidium bromide.
- ____ 20. Student and Adult Supervisor must consult the appropriate **Materials Safety Data Sheets (MSDS)** prior to use of any hazardous chemicals, high vacuum equipment, heated oil baths, NMR equipment, UV lights, lasers and high-temperature ovens.
<http://www.msdsonline.com/msds-search/>
- ____ 21. Student will not use controlled substances (drugs, chemicals, anesthetics, narcotics, etc.) that are regulated by the comprehensive Drug Abuse Prevention and Control Act of 1970.
- ____ 22. Student will NOT perform dangerous activities, such as being on a roof or igniting objects, using guns or gunpowder or launching rockets (exception: model rockets propelled by air or water, or from a kit that uses a sealed propellant may be used while under the supervision of the teacher or adult supervisor.)

C. REQUIRED SIGNATURES (Check any missing signatures)

- ____ 1. Student (required for all projects)
- ____ 2. Teacher/Advisor (required for all projects)
- ____ 3. Biomedical Scientist (required for all projects involving hazardous materials conducted at a research facility)
- ____ 4. Designated Adult Supervisor (required for all projects involving hazardous materials; usually the Site Science Fair Coordinator)

Los Angeles County Science Fair
SRC Project Review Sheet- JUNIOR DIVISION
CHECKLIST: POTENTIALLY HAZARDOUS MICROBES
(Bacteria, molds, fungus, viruses, pathogenic Protozoans)

JR

Student's Name _____

School _____

Site Coordinator _____

Check any ***MISSING INFORMATION*** in blank spaces on the LEFT: if desired, add a "tick" mark in pencil on the right to indicate completion

A. RESEARCH PLAN

- ____ 1. Objective
- ____ 2. Problem
- ____ 3. Hypothesis
- ____ 4. Type of microbe(s), species (if known) and source of microbes and/or location of sampling (in detail)
- ____ 5. Location of culturing and experimentation
- ____ 6. Bibliographic References (a minimum of 3 references, not exclusively Internet)

B. PROCEDURE/RESEARCH TECHNIQUES (or additional page(s))

- ____ 7. Provides a **clear and detailed** description of specific institutional safety procedures for management of materials and protection of students used by student(s).
- ____ 8. Provides a **clear and detailed** description of specific institutional safety procedures for management of materials and protection of students used by adult(s).
- ____ 9. Description of culture medium to be used
- ____ 10. Description of method and timing of sealing petri dishes
- ____ 11. Description of disposal method(s) to be used for hazardous materials, in detail

C. SAFETY PRECAUTIONS (See "Guidelines For Microbial Research And Safety Precautions")

- ____ 12. Microbes were obtained from an appropriate Science Supply Store, College, Scientific Institution OR Biomedical Scientist.
- ____ 13. Microbes will be collected from the environment and/or stored in a safe manner, with safety precautions outlined in the *Science Safety Handbook for California Schools* (2012.)
- ____ 14. Student will NOT be **directly involved** in the acquisition of microbes (*exception: microbe collection in the environment using sterile swabs and appropriate collection techniques.*)
- ____ 15. Research procedures will involve a Biomedical Scientist or Designated Adult Supervisor.
- ____ 16. If research is conducted at an institutional setting like a college or hospital, standard microbial practices will be followed as defined in Biosafety in Microbial and Biomedical Laboratories (BMBL) published by CDC-NIH.
<http://www.cdc.gov/biosafety/publications/bmb15/index.htm>
- ____ 17. Experimental procedures will **NOT** be conducted in a home environment.
- ____ 18. Procedure **DOES NOT** intend to produce bacteria with antibiotic-resistance.
- ____ 19. Procedure involving existing resistant microorganisms will **NOT** be performed at home or in a school, but at a research institution.
- ____ 20. Procedure for microbes cultured in disposable plastic petri dishes includes the use of biohazard disposal bags and District pick-up of bags as hazardous waste
- ____ 21. Procedure for microbes cultured in glass petri dishes involves the careful autoclaving or pressure-cooking of microbes at the end of the experiment before disposal.
- ____ 22. Materials used in culturing and lab countertops will be sterilized with 10% bleach.

D. REQUIRED SIGNATURES (Check any missing signatures)

- ____ 1. Student (required for all projects)
- ____ 2. Teacher/Advisor (required for all projects)
- ____ 3. Biomedical Scientist (required for all projects involving microbes conducted at a research facility)
- ____ 4. Certification by Person Providing Microbial Sample (required for projects involving microbes NOT collected in the environment)
- ____ 5. Designated Adult Supervisor (required for all projects involving microbes; usually the Site Science Fair Coordinator.