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| **Student Name:**  |
| **School Name:**  |
| **Category:**  |
| **Science Teacher’s Name:**  |

**Question or Problem being addressed – Title**

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**Hypothesis/Engineering Goals**

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 **Rationale**Brief synopsis of the background research that supports your research problem and explains why this research is important scientifically.

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**Material List**Bulleted list of all items used in research. Make sure to include concentration of all chemicals, source, amount of all living organisms, and all equipment used.

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 **Subject Specific Items**Items 1–4 below are subject-specific guidelines for additional information to be included in your research plan/project ONLY if you are doing any of the following types of projects.Write your answer below the question delete the items you do not use. **See the subject specific rules in the ISEF rule book BEFORE beginning this section.**

**1. Human participants research:**
**a. Participants:** Describe age range, gender, racial/ethnic composition of participants. Identify vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
**b. Recruitment:** Where will you find your participants? How will they be invited to participate?
**c. Methods:** What will participants be asked to do? Will you use any surveys, questionnaires or tests? What is the frequency and length of time involved for each subject?
**d. Risk Assessment:** What are the risks or potential discomforts (physical, psychological, time involved, social, legal, etc.) to participants? How will you minimize risks? List any benefits to society or participants.
**e. Protection of Privacy:** Will identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential/anonymous? If anonymous, describe how the data will be collected. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will data be stored? Who will have access to the data? What will you do with the data after the study?
**f. Informed Consent Process:** Describe how you will inform participants about the purpose of the study, what they will be asked to do, that their participation is voluntary and they have the right to stop at any time.

**2. Vertebrate animal research:**
a. Discuss potential ALTERNATIVES to vertebrate animal use and present justification for use of vertebrates.
b. Explain potential impact or contribution of this research.
c. Detail all procedures to be used, including methods used to minimize potential discomfort, distress, pain and injury to the animals and detailed chemical concentrations and drug dosages.
d. Detail animal numbers, species, strain, sex, age, source, etc., include justification of the numbers planned.
e. Describe housing and oversight of daily care
f. Discuss disposition of the animals at the termination of the study.

**3. Potentially hazardous biological agents research:**
a. Give source of the organism and describe BSL assessment process and BSL determination.
b. Detail safety precautions and discuss methods of disposal.

**4. Hazardous chemicals, activities & devices:**
a. Describe Risk Assessment process, supervision, safety precautions and methods of disposal.

**Procedure**Describe in detail the method or procedure required to complete your project, including risk and safety, proper disposal of materials if needed.

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 **Data Analysis**Describe the procedure you will use to analyze the data that will answer the research question, hypothesis, or engineering goal?

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 **Bibliography**

 List at least five major references (e.g. science journal articles, book, credible internet sites) from your literature review. **See pages 21-23 of the rule book to see references for subject specific projects.**

* If you plan to use **vertebrate animals**, one of these reference must be an animal care reference.
* If you plan on using **human subjects**, one of these references must be from the list of human subject
* If you plan on using **potentially hazardous biological agents,** one of the reference must include aseptic technique.
* If you plan on using **chemicals,** each chemical should include a reference for a MSDS/SDS. (Chemicals does not include water or any household product)

List of possible references/resources are included in the ISEF Rules and guidelines, pages 21-23.

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