Pr eA P Ch em	**Research Project:** **Stage 2: Initial Proposal Guidelines**	Name _____ Period _____

Process:

- Start creating your data book with your approved topic, research, and ideas. See The Project Data book information listed below for the guild lines.
- Research the topic and develop the initial proposal.
- Write the initial proposal and turn it into the teacher.

What's due: Turn in 2 copies of the Initial Proposal, one for the teacher's record and one to be returned to the student.

Due Date:

Due Date	Science Fair
Sept. 12th	Initial Proposal Submitted

Project Data Book (Log Book):

This is the core of the project. Each entry should show the date the entry was made. Entries include rough drafts of experimental designs, procedures, notes of changes made to procedures during the course of the project, equipment designs and modifications, sources for supplies and equipment, qualitative and quantitative observations made each day. Qualitative observations include observations without measurements, references to videotapes of the experiment, photographs and drawings of results, etc. Quantitative observations are measurements of results recorded in tables, with entries in the tables showing the dates measurements were taken. When writing the research paper, a well-kept logbook can be an invaluable resource. In addition, a table showing the date of each day spent and number of hours spent working on the project may be required by the supervising teacher**.**

Initial Proposal Criteria:

Problem:

Write the problem as a question. *What question is the researcher attempting to answer? This should NOT be something that has been done before, by the student experimenter or anyone else. Repeating a previous year's science project is unacceptable. To get ideas, watch the news, read the paper, BE OBSERVANT. Ask questions. Look for things in the world about which questions might be generated.*

Origin of project idea:

In paragraph form, write what was seen that led the experimenter to ask this question. **Do not use personal pronouns like "I" or "me".** *In what manner was the problem derived? What was noticed in the world around the experimenter that made him/her think to ask this particular question? Was an ad or an article seen? Was it a discussion with a friend or a relative? Did it arise due to an event that affected*

someone? Acceptable responses do not include "Because my teacher made me do it" or "I had to do it for class".

Hypothesis:

Write a hypothesis as an "If…then…" statement. *The "if" part of the sentence is the independent variable and the "then" part of the sentence is the dependent variable. If an "if…then" statement is not used, then make sure the statement is something that can be proved. Do not say "Cell phones will have an effect on cell growth." Say "Cell phones will cause the cells to shrink by 25%". Something that can be proved mathematically is best.*

Possible Solutions to the Problem:

In paragraph form, write possible ways to solve this problem. This does NOT need to be a fully detailed experimental procedure. A detailed experimental procedure will be due later in the Research Plan.

What are some ways that this problem can be reasonably solved? "Reasonable" includes that community resources and funding are kept in mind and that some ideas of how the problem can be solved have been thought out.

Style and Length Requirements:

- This paper must not be shorter than one page, and not longer than two pages.
- IT MUST BE TYPED – no exceptions!
- Format is: one inch margins all the way around, **double-spaced**.
- Indent each paragraph 5 spaces. The font must be either 12-point Arial or Times New Roman**.**
- **The evaluation rubric must be attached to the front of the paper** (page 3 of this document).

NOTE: There are science fair projects that need additional project approval forms when the project deals with any of the following:

- human subjects
- vertebrate animals
- pathogenic agents
- controlled substances
- recombinant DNA
- human and/or animal tissue
- hazardous substances and/or devices.

If a student is conducting one of these projects, please contact the LASER sponsor for further directions on which forms to use and the approval process.

PreAP Chem	**Research Project:** **Stage 2: Initial Proposal Rubric**	Name _____ Period _____

Problem: 0 3 5 7 10 points

Origin of project idea: 0 5 10 15 20 25 30 points

Hypothesis: 0 3 5 7 10 points

Possible Solutions to Problem: 0 5 10 15 20 25 30 points

Style and Proper Format: 0 3 5 7 10 points

Science Fair form 1B is signed and dated: 0 10 points

TOTAL EVALUATION SCORE: _____ / 100 points

Additional comments: