

Please complete the information/questions begun/seen below with red ink. Save this document to your computer, and add a printed hardcopy to your application.

Date:

Student Name(s):

Project Title:

Project Question: The question should address the comparison of at least 3 (4 in grade 8) materials/ products/ reagents, methods or conditions (for ex. different temperatures) in order to figure out which of the 3-4 comparators is the most effective or the best as determined by a quantitative (measurable) end point(s). (Sample Question: Which purification technique is the most effective in purifying tap water?)

My project addresses the following question:

Rationale for the Study or Experiment: Why did you choose this project? (Give a very brief summary of the research leading to the project or question.)

I chose this project because:

Hypothesis: Based on your literature research, of all available information on this subject make a prediction on what will be best of the 3 or 4 comparators you are studying and the reason why you think so. (Sample hypothesis: If UV destroys bacteria best, then the UV purification method will purify water the best). Use an "If...., then....." statement.

My project hypothesis is:

Materials: List of specific biological agents, chemical reagents, instruments, software, etc. along with the source from where they will be obtained.

My project uses the following list of materials:

Experimental Methods/ Procedures:

Procedure (step-by-step procedure with details including exact specifications and quantities).

- Your plan should clearly state which 1 variable you are changing and which ones you are keeping constant (only 1 variable should be changed at a time).
- Clearly define a control experiment (where the variables are unchanged) to which to compare the results from your experiments.
- Have a minimum of 3 products/processes (*grades 6-7*), or 4 products/processes (*for grade 8*) for comparison.
- *The entire experiment must be done at least two times, preferably 3 times, to ensure the repeatability of the results.*

Answers to the following questions will help you describe your methods and Procedures.

Products/ Processes being compared (*list 3 for grades 6-7, or 4 for grade 8*) -

My project compares the following products/processes:

- 1.
- 2.
- 3.
- 4.

Control(s) = constant conditions of experiment (examples are temperature, time, soil type, current, etc)-

My project Control is:

Variables = parameters of the experiment which will be changed (one at a time) to assess the “best” or “more efficient” products or processes-

My project variables are:

Endpoints = what parameters will be measured to prove one product/process better than another? (examples are distance, length, volume, mass, speed, wavelength, power output, etc. or any of the above parameters per unit of cost). Include the units by which the endpoint is measured (samples are **cm(length)**, **squared cm (area)**, **cubic cm (volume)**, **degrees, watts, days**, etc).

My project endpoints are:

Bibliography: List the authors and titles of at least five peer reviewed, (high school) or three (middle school) science or engineering books or articles that you have read and found useful for your research subject.

Example: Author 's Name, Year of publication, “Quoted Title of Magazine Article (magazines only)”;
Underlined Title of Book or Magazine, date, volume, and number of magazine issue. Page numbers read. If you use a web site: www.urlname.ext, name of topic from the home page, author, and date read.

My project bibliographic references are:

- 1.
- 2.
- 3.
- 4.
- 5.