

Research Plan and Abstract Defined

Research Plan Defined

A Research Plan is written or outlined **BEFORE** the start of an experiment. It states the method or steps that **will be used** in the experimental research. Thus, the method is written in the **FUTURE TENSE**. It needs approval **PRIOR** to the actual start of the experiment by the Sponsor, SRC, or IRB where applicable. Remember, this is **NOT** the actual science project report. This is only the plan that will be followed.

The research plan should be redefined once definite details have been established.

Remember: This is the Research Plan and NOT the Science Project Report

- **Send only** what the research plan is asking for (no title page, acknowledgements)
- Should **NOT** have data, and/or conclusion.
- Should **NOT** be written in the past tense.

Components of a Research Plan: Follow the format on the Research Plan Attachment, **p. 30.** by writing. The Research Plan should be typed and not hand-written.

Example:

- Question or Problem** (statement stated as a question leading to the study)
- Goal/expected outcome/hypothesis** (state the purpose, objective, or engineering goal) Hypothesis should follow the problem, purpose, etc. It is a temporary answer, prediction, educated guess.
Stay away from "I think that..." It should be direct and not wordy and not in first person
It should relate to the problem or the question.
- Method or Procedure**
 - ◆ Measurements should be in metric units.
 - ◆ Include concentrations, quantities, and instruments or major equipment used.
 - ◆ If applicable, include a copy of surveys, questionnaires, or test administered.
 - ◆ Mention safety or sterilization procedures when necessary.
 - ◆ If working with bacteria or fungi, mention where they will be collected or ordered from, cultured and observed, and how samples will be disposed.
 - ◆ Indicate supervision when there should be supervision.
 - ◆ If working with Human Subjects, how are their rights, welfare, and identification being protected?
 - ◆ Justify the use of nonhuman vertebrate animals.
 - ◆ Stay away from personal pronouns: "I will...We will...Next I will...etc."
 - ◆ It is best to start with ACTION words, "Measure 3.5 ml of water and..." or "3.5 ml of water will be measured and transferred to a..."