

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..."