Name

Date Pd

Research Project—Proposal Checklist

**TITLE**

\_\_\_\_\_\_\_\_\_\_Concise

\_\_\_\_\_\_\_\_\_\_Descriptive

\_\_\_\_\_\_\_\_\_\_Informative

\_\_\_\_\_\_\_\_\_\_Written in scientific style (*i.e.*, NOT a question)

\_\_\_\_\_\_\_\_\_\_Includes the independent variable

\_\_\_\_\_\_\_\_\_\_Includes the dependent variable

\_\_\_\_\_\_\_\_\_\_Scientific names of organisms are used (if applicable)

\_\_\_\_\_\_\_\_\_\_Specific chemical procedures are mentioned (if applicable)

**INTRODUCTION**

\_\_\_\_\_\_\_\_\_\_Problem/topic is stated

\_\_\_\_\_\_\_\_\_\_Explanation of why you are studying it

\_\_\_\_\_\_\_\_\_\_Explanation of how the problem is being addressed

\_\_\_\_\_\_\_\_\_\_Explanation of how you plan to find a solution

\_\_\_\_\_\_\_\_\_\_Does NOT include any personal pronouns such as “I,” “me,” or “my”

**EXPERIMENTAL DESIGN TABLE**

\_\_\_\_\_\_\_\_\_\_Includes the independent variable

\_\_\_\_\_\_\_\_\_\_Includes the dependent variable, separated into quantitative and qualitative categories, if applicable

\_\_\_\_\_\_\_\_\_\_Lists background questions that appear in your notebook

\_\_\_\_\_\_\_\_\_\_Lists all variables to remain constant

\_\_\_\_\_\_\_\_\_\_Lists the control group

\_\_\_\_\_\_\_\_\_\_Lists all experimental groups

\_\_\_\_\_\_\_\_\_\_Scientific names of organisms are used (if applicable)

\_\_\_\_\_\_\_\_\_\_Specific chemical procedures are mentioned (if applicable)

**HYPOTHESIS**

\_\_\_\_\_\_\_\_\_\_Independent variable is included

\_\_\_\_\_\_\_\_\_\_Dependent variable is included

\_\_\_\_\_\_\_\_\_\_The relationship between the independent variable and dependent variable is stated

\_\_\_\_\_\_\_\_\_\_The predicted effect of the independent variable on the dependent variable is included

\_\_\_\_\_\_\_\_\_\_A statement of data to be collected is present

[Note: There are additions to the hypothesis that may require you to rewrite or amend your hypothesis. ]

**MATERIALS**

\_\_\_\_\_\_\_\_\_\_List of supplies

\_\_\_\_\_\_\_\_\_\_List of consumables

\_\_\_\_\_\_\_\_\_\_List of tools/instruments

\_\_\_\_\_\_\_\_\_\_Exact technical specifications for each material are included

\_\_\_\_\_\_\_\_\_\_Chemical concentration, purity and supplier is listed (if applicable)

\_\_\_\_\_\_\_\_\_\_Type, brand and model of each apparatus is included (if applicable)

\_\_\_\_\_\_\_\_\_\_Scientific names of organisms are used (if applicable)

\_\_\_\_\_\_\_\_\_\_Characteristics (gender, age, *etc.*) of organisms are listed (if applicable)

\_\_\_\_\_\_\_\_\_\_Metric amounts of materials and consumables are listed (if applicable)

**METHODS**

\_\_\_\_\_\_\_\_\_\_Tells how the experiment will be done

\_\_\_\_\_\_\_\_\_\_Includes enough detail to allow its replication

\_\_\_\_\_\_\_\_\_\_Is in narrative, *i.e.*, paragraph, form

\_\_\_\_\_\_\_\_\_\_The first paragraph details the “set-up” of the project

\_\_\_\_\_\_\_\_\_\_The first paragraph includes pretrial information/results (if applicable)

\_\_\_\_\_\_\_\_\_\_The second paragraph details “Day 1” of the data collection

\_\_\_\_\_\_\_\_\_\_Repetition of trials (if applicable) is outlined including how often repeated trials will be conducted as well as how experimental groups will be manipulated

The following questions are addressed within your methods section. In other words, they are not to be answered separately but should be incorporated within your narrative.

\_\_\_\_\_\_\_\_\_\_How will data be collected?

\_\_\_\_\_\_\_\_\_\_How will measurements be taken?

\_\_\_\_\_\_\_\_\_\_How will the data be measured or obtained?

\_\_\_\_\_\_\_\_\_\_What tools or techniques will be used?

\_\_\_\_\_\_\_\_\_\_How will qualitative observations be recorded (if applicable)?

\_\_\_\_\_\_\_\_\_\_How often will data be collected and recorded?

\_\_\_\_\_\_\_\_\_\_How long will the experiment last?

\_\_\_\_\_\_\_\_\_\_How does your research design address potential extraneous variables (address each variable independently)?