AP Psychology Research Study—Real World Applications

**Directions**: *You need to choose an experiment or phenomenon we’ve learned about in class this year and either re-create the experiment or create a new experiment that relates to our culture today. Your experiment should prove the central concept of the original study or phenomenon, showing how the concept is still true and relevant. Your overall project will consist of an experiment/ study/ or test, a research report, a poster, and a conference presentation. Requirements for each aspect of the final project are detailed below:*

**Experiment Requirements:**

***Prep Work***

* Located your study/phenomenon in the textbook.
* Brainstorm possible ways you can test this phenomenon to make sure it still stands in our culture today.
* Research other experiments that have been done in the past few years/decades to see what you can do differently and make sure the experiment you design hasn’t been done already.
* Choose a minimum of THREE (3) previous studies, (the one from the textbook and two additional studies you research on your own), to discuss in the background section of your research paper.
* Write a detailed hypothesis and a *null hypothesis*, which you will be seeking to disprove. You will need to explain these thoroughly in your final paper.
* Fill out the designing my own experiment worksheet and have it approved prior to starting the experiment process.

***If you’re creating an experiment you need the following:***

* Decide how to find a random sample (write permission slips if needed)
* Write a participant information letter, informing your participants of the study and have a place for them to sign their informed consent. (Decide if you will offer compensation or other incentives to get participants to participate and determine if that will impact your results)
* Plan the location, time of day, and how you will control potential confounding variables on the day of your experiment.
* Obtain permission from whoever needed to conduct your experiment in the place of your choice on that particular day.
* Assign roles to group members (if needed) or recruit an assistant to make sure protocol is followed and no biases are present.
* Make sure you keep a journal to record data, experiences.
* After experiment, analyze data. Conduct measures of central tendency for each condition of the experiment, and separate as needed (boy/girl, etc) if it’s necessary for your hypothesis.
* Bring data to me (Ms. Alston) to analyze together, run the necessary statistical tests, to determine the final results and whether or not your results were significant enough to prove your hypothesis.
* Create a graph illustrating your data. Check with me (Ms. Alston) to make sure graph is appropriate, if you need assistance.
* Determine if you reject the null hypothesis or fail to reject the null hypothesis.
* Discuss with group whether your findings had any confounding variables, any bias (researcher, or participant bias, etc). Consider if any other explanation could explain your findings other than your experimental procedure. If so, jot them down and discuss them in the research report.

***Research paper requirements:***

* **Intro/ Abstract**

Which type of research question did you have? Why? What value does obtaining the answer to this question give to society? State your alternative hypothesis and summarize of your project and results.

* **State your purpose**

In this section, you will explain the purpose of your experiment. What is your Null Hypothesis? You should discuss what you expect the outcome to be and state you’re alternative and null hypothesis. State what you what to prove with your research.

* **Background sources**

You should research at least two prior experiments done in the field of psychology that have helped you develop your own research study. The experiments should be summarized and you should show how they influenced your own research.

* **Experimental design/ Materials**

You should explain how you research study was designed. Address the following questions in this portion, depending on the type of study you choose:

* + What type of method did you use?
	+ Why did you select this method?
	+ What materials did you utilize for this research study?
* **Procedure:**

Explain what you did over the past two weeks. Very detailed explanations, from the time you developed your question, came up with the null and alternative hypotheses, designed your research and executed your study (survey or mini experiment)

* **Data**

Explain how you kept track of data and what your data results were. This is where you should include your visual/graph.

* **Analysis**

Discuss what you noticed about your experiment. Did you see any patterns? Did you reject your null hypothesis or fail to reject the hypothesis? Why?

* **Conclusion**

Did your findings support your hypothesis? Did you make any experimenter errors? What have you learned?

* **Summary**

Brief summary of experiment, and future recommendations to anyone who would want to replicate this experiment.

***Brochure Requirements:***

* Title
* Psychologist names
* Picture (on front cover)
* Purpose of study
* Abstract
* Sample of question, picture, or response from the experiment
* Pictures (inside, minimum of 2)
* Discussion and application to real world. (Essentially, why does this study matter? Why is it important? What can this information contribute to our world today?
* Must be PRINTED in color

***Poster Requirements:***

* Title
* Background sources (summarize each background study individually; 3-4 sentences only)
* Purpose
* Experimental design
* Sample of question, picture, or response from the experiment
* Pictures (inside, minimum of 3)
* Summary of data and graph
* Conclusions (rejection of fail to reject null hypothesis
* Discussion, real world applications

***Presentation Requirements:***

* All group members present (drop two letter grades if absent)
* Dress appropriately
* Speak clearly; do NOT simply read from poster board or brochure. They are visuals for audience, not an aid for you. You should practice what you will say like you would prepare for a speech.
* Be prepared to answer questions.
* You could save samples from the actual experiment for people to look at while they are at your table.

**Due Dates:**

* ***Design Your Own Experiment worksheet, with topic of choice and plan, as well as discussion with and approval of Ms. Alston:*** Thursday May 11th, 2017 (B-Day); *before Friday* May 12th , 2017 (A-Day)
* ***Experiment Complete:*** Thursday May 25th. 2017 (B-Day); Friday, May 26nd, 2017 (A-Day)

**Final Projects Due and Presentations will be Thursday and Friday, June, 1st & 2nd, 2017 (B-day and A-Day classes)**

Design your own Research Experiment

* Research Study/Concept/Phenomenon of interest :
* Define the concept:
* What does research say already? (state and briefly summarize three previous and related studies):
* Hypothesis:
* Null hypothesis:
* Operational Definitions:
* How will you test your hypothesis?
* How will you find a representative, random sample? Explain.
* What biases will you have to be mindful of, in order to obtain the best, most objective results? Explain.
* How will you avoid/rule out confounding variables?
* Independent Variable:
* Dependent Variable:
* Control Group:
* Experimental group:
* Explain the procedures of your experiment? (write the order that you will use in conducting your research)
* How will you use statistics to validate your results?

**SAMPLE: Informed Consent Document Template**

**PROJECT TITLE**

**INTRODUCTION**
You are invited to join a research study to look at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Please take whatever time you need to discuss the study with your family and friends, or anyone else you wish to. The decision to join, or not to join, is up to you.
In this research study, we are investigating/testing/comparing/evaluating \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

*The information here should be a clear and short description of the “bottom line” of the study. Hold details of the study until later in the document. Briefly give the subjects some background information about why this study is being done, this can include information about what is already known and what you hope to learn*.

**WHAT IS INVOLVED IN THE STUDY?**
If you decide to participate you will be asked to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. We think this will take you \_\_\_\_\_\_\_\_\_\_\_minutes.

*Refer to the subjects as “you*.” *Tell subjects* ***exactly*** *what to expect. Explain what will happen during the study and how the study will work. Include* ***everything*** *that subjects will be asked to do. Describe all surveys and data collection instruments that subjects will experience. Indicate how long each survey or procedure will take and state how long (e.g. minutes, hours, days, months, until a certain event or endpoint) the subjects will be part of the study.*

The investigators may stop the study or take you out of the study at any time they judge it is in your best interest. They may also remove you from the study for various other reasons. They can do this without your consent.

*If appropriate, list any additional reasons why subjects might be taken off the study.*

You can stop participating at any time. If you stop you will not lose any benefits.

**RISKS**
This study involves the following risks \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

There may also be other risks that we cannot predict.

*List the physical and non-physical risks of participating in the study above.* *Non-physical risks may include  social, psychological, or economic harm; risk of criminal or civil liability; or damage to financial standing, employability, or reputation.*

**BENEFITS TO TAKING PART IN THE STUDY?**
It is reasonable to expect the following benefits from this research: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. However, we can’t guarantee that you will personally experience benefits from participating in this study. Others may benefit in the future from the information we find in this study.

*List all the benefits that might* ***reasonably*** *be expected from participating in the study.  First describe benefits to subjects, then describe benefits to others. If there are no benefits from participating in the research, state that fact.*

**CONFIDENTIALITY**

We will take the following steps to keep information about you confidential, and to protect it from unauthorized disclosure, tampering, or damage: \_\_\_\_\_\_\_\_\_\_\_

*List all individuals and agencies who will have access to the data and records, and how data will be described if published or shared with others. Will you be using direct quotes which could be traced to an individual? Will you be aggregating the data?*

*Describe confidentiality protections here.  Explain how you are protecting the subject’s information. Give details as appropriate: for example, are data files kept in locked cabinets, are the data kept on a computer, is a password required for getting onto the system; who has access to the data, etc.*

**INCENTIVES***Indicate if subjects will receive anything for participating.*

**YOUR RIGHTS AS A RESEARCH PARTICIPANT?**
Participation in this study is voluntary. You have the right not to participate at all or to leave the study at any time. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of benefits to which you are entitled, and it will not harm your relationship with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

*Describe procedures for withdrawing and any follow-up that you will request for subjects who withdraw early. Follow-up such as questionnaires that are part of the research cannot be forced upon subjects who wish to withdraw.*

**CONTACTS FOR QUESTIONS OR PROBLEMS?**
Call  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  or email\_\_\_\_\_\_\_\_\_\_\_ at \_\_\_\_\_\_\_\_\_\_\_if you have questions about the study, any problems, unexpected physical or psychological discomforts, any injuries, or think that something unusual or unexpected is happening.

Contact (Ashley Alston), AP Psychology Teacher at Executive Leadership and Entrepreneurial Development at ashleyc.alston@cms.k12.nc.us if you have any questions or concerns about your rights as a research participant.

*Provide the name of one or more researchers who can be reached for assistance. If you are a student provide your advisor's contact information too.*

**Consent of Subject (or Legally Authorized Representative)**Signature of Subject or Representative                        Date
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Upon signing, the subject or the legally authorized representative will receive a copy of this form, and the original will be held in the subject’s research record. Unless otherwise required by ELED Ms. Alston. Exempt research does not require a signature.  For all other research, in some cases it may be in the best interest of the subject not to collect a signature and Ms. Alston will advise you if that is the situation.*