BIOL 121 Research Proposal: Lab 1

# Research Question 1: Difference Between Two Groups

## **1. What is your research question?**

## **2. Conduct background research.** Some background research has already done for you and the data made available.

## **3. Construct a hypothesis.**

## What is your hypothesis? What is your H0?

## Why do think this may be the case? What is the rationale for this hypothesis?

## **4. Test the Prediction/Design your experiment.** This is observational, based on existing data, in Unit 1.

## What variables do you have? You need an IV and a DV? Should they be continuous or categorical/grouping? Label them as needed.

## What statistical test will you use to test your hypothesis? Will you need a one-tailed or two-tailed test? Will you need a paired or unpaired test?

How might you graph your data? What would they look like if your reject your H0?

# Research Question 2: Relationship Between Two Variables

## **1. What is your research question?**

## **2. Conduct background research.** Some background research has already done for you and the data made available.

## **3. Construct a hypothesis.**

## What is your hypothesis? What is your H0?

## Why do think this may be the case? What is the rationale for this hypothesis?

## **4. Test the Prediction/Design your experiment.** This is observational, based on existing data, in Unit 1.

## What variables do you have? You need an IV and a DV? Should they be continuous or categorical/grouping? Label them as needed.

## What statistical test will you use to test your hypothesis? Will you need a one-tailed or two-tailed test?

How might you graph your data? What would they look like if your reject your H0?