Lab 3A - The results are in!

Directions: Follow along with the slides and answer the questions in **bold** font in your journal.

## Conducting experiments

* Previously in class, you conducted an experiment to gauge how a stimulus affected people's perception of time.
  + Some people were given a treatment, others were not.
* In this lab, we'll use the data cycle to analyze the *research question*:

*Does the stimulus your class chose change people's perception of time?*

## Coming up with questions

* **Write down two statistical questions that will help you answer the *research question* from the previous slide.**
* Then, *export*, *upload*, *import* your experiment data into RStudio.
  + If you're having trouble coming up with good statistical questions, try loading the data and looking at the variables.
  + Ask yourself, *How would I use these variables to answer the research question?*

## Analyzing our data

* Create appropriate plots to answer your statistical questions.
  + **Are there any outliers or unusual observations that require some cleaning before you can interpret your plots?**
* Calculate appropriate numerical summaries to answer your statistical questions.
* Interpret your plots and summaries.
  + **Write down a few sentences with your interpretations.**

## Wrapping it up

* Is it possible your initial results occurred by chance alone?
  + **Use repeated shuffling to determine how likely the typical difference between the two groups occurred by chance alone.**
  + **Create a plot and use it to justify your answer.**
* What do you conclude about the *research question*?
  + **Write a report using the plots and analysis you conducted to answer the *research question*.**
  + Be sure to describe how you conducted your experiment.