

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## **IDS Unit 2 Design Project and Presentation**

### **Asking and Answering Statistical Investigative Questions of Our Own Data**

Available datasets:

1. Food Habits
2. Time Use
3. Stress/Chill
4. Personality Color

Your mission is to ask and answer a statistical investigative question using at least one dataset above.

1. Your question must include a comparison of 2 distinct groups.
2. Your analysis should address whether any observed differences are real or could be simply due to chance.
3. You should use at least 2 of the following methods to answer your question with appropriate explanations:
  - ☐ Merge data
  - ☐ Create simulations
  - ☐ Calculate probabilities based on simulations
  - ☐ Use a Normal model
  - ☐ Shuffle/permute data

You will have 5 days to complete this project with your assigned partner. You need to:

- ☐ Prepare a presentation (both partners need to participate) that includes:
  - A 4-slide, 5-minute presentation.
  - An explanation of why you think your statistical investigative question is interesting.
  - An interpretation of supporting plots and summaries that answer your question.
  - A reasoning of whether you think the outcome might be due to chance.
- ☐ Submit a 2-4 page, typed, double-spaced summary of your analysis.



#### Project Assignment Sequence:

- ☐ Day 1: Decide on a statistical investigative question with assigned partner.
  - ☐ Get approval from teacher.
- ☐ Day 2: Working day for analysis – create plots and numerical summaries.
- ☐ Day 3: Working day for analysis – create presentation (4 slides maximum).
- ☐ Day 4: Presentations.
- ☐ Day 5: Presentations.