

Name_____

Date_____

LAB 1B: Get the picture? ***Response Sheet***

Directions: Record your responses to the lab questions in the spaces provided.

Where'd we leave off ...

Variable Types

- Is height a numerical or categorical variable? Why?
- Is sex a numerical or categorical variable? Why?
- List either the different categories or what you think the measured units are for height and sex.

Which is which?

Use the code's output to help you complete the following:

- Write down 3 variables that you think are *categorical* variables and why.
- Write down 3 variables that you think are *numerical* variables and why.

Data Structures

- What information does the `str` function output?

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- Were you able to correctly guess which variables were categorical and numeric? Which ones did you mislabel?

Visualizing data

- Which function, either bargraph or histogram, is better at visualizing categorical variables? Which is better at visualizing numerical variables?

We have options

- Describe the distribution of weight. Make sure to describe the *shape*, *center* and *spread* of the distribution.
- How did including the option `nint = 3` change the histogram?
- Does setting `nint = 3` impact how you would describe the shape, center and spread?
- Try other values for `nint`. What value produced the best graph? Why?

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How often do people text & drive?

Make a graph that shows how often people in our data texted while driving.

- **What does the y-axis represent?**

- **What does the x-axis tell us?**

- **Would you say that *most* people *never* texted while driving? What does the word *most* mean?**

- **Approximately what percent of the people texted while driving for 20 or more days? (Hint: There's 17232 students in our data.)**

Does texting and driving differ by sex?

- **Write a sentence explaining how boys and girls differ when it comes to texting while driving.**

- **Would you say that most girls never text and drive? Would you say that most boys never text and drive?**

- **How did including the groups argument in your code change the graph?**

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Do males and females have similar heights?

- Can you use this graphic to answer the question at the top of the slide? Why or why not?
- Is grouping numeric values, such as heights, as helpful as grouping categorical variables, such as texting & driving?

Do males and females have similar heights?, continued

- Do you think males and females have similar heights? Use the plot you create to justify your answer.

On your own:

- Choose one variable from the cdc data, make a graph, and use the graph to describe how drive_text use differs with this variable.