

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

Which is which?

- 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

- List all the types of info the `str()` function outputs

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

Visualizing data

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

We have options

- Make a graph that shows the distribution of people's weight.
 - Describe the distribution of weight. Make sure to describe the shape, center and spread of the distribution.
- How did including the `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?

- 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 work *most* mean?
- Approximately what percent of the people texted while driving for 20 or more days? (Hint: There's 13677 students in our data.)

Does texting and driving differ by gender?

- 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/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/females have similar heights?

- Why does this work for bargraphs but not for histograms?

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

- Just like we did for the histogram, is it possible to create a *split* bargraph? Try to create a bargraph of `drive_text` that's split by gender to find out.

On your own:

- What other factors do you think might affect how often people text and drive?
 - Choose one variable from the `cdc` data, make a graph, and use the graph to describe how `drive_text` use differs with this variable.