Name(s)_____ Period _____ Date _____

Practice PT Overview and Rubric - Tell a Data Story

Background

In this unit, you have collected data about you and your classmates and have learned analysis and visualization skills that should allow you to find interesting patterns within it. At this point, you will have worked with a partner to clean the data that was collected and have learned how to use computational tools to summarize this data. Now it's time to put all these skills together and tell a story with the data.

General Requirements

This task requires you to:

- Manipulate data that you have collected
- Create a computational artifact in the form of a data visualization
- Write about your artifact and its possible interpretations

Step 1: Make your own copy of the data

You will work individually for this project. You may have worked on this data with partner beforehand and you may still collaborate with them to share ideas and brainstorm. However, this project must be a reflection of your individual creativity and work. So make a separate copy of the data you cleaned with your partner so that you don't accidentally clobber each other's work.

Step 2: Find your data story

Dig into the data! Use your skills for data manipulation to find connections and trends. Remember the skills you have for doing discovery:

- Sort data
- Rearrange columns
- Filter
- Make summary (pivot) tables
- Use charts and visuals for discovery

Step 3: Visualize your data story

You will need to design a data visualization that clearly communicates the data story you found. Here are a few things to help you along the way:

- Use the Data Visualization 101 guide to help you pick good chart types.
- Make your visualization clear and easy to read.
- In some instances, **a simple table may be a better way to show your data than a chart.**
- Use text along with your visual to help explain your data story. If you need to use too much text, however, ask yourself if there's a better way to visualize it.

Step 4: Written responses

Respond to the written responses below. Note that a recommended word count is provided for each question.

1. Describe how you collected the data for your visualization including how it was collected, when it was collected, and over what period of time. Your description should be understandable by someone unfamiliar with this project.
   (approximately 100 words)

2. Describe your development process, explicitly identifying the computing tools and techniques you used to create your artifact. Your description must be detailed enough so that a person unfamiliar with those tools and techniques will understand your process.
   (approximately 100 words)

3. **Describe your findings:**
   - **Describe the trend, pattern, or relationship** you found within your data. How is it shown with your visualization?
   - Come up with a **possible story or explanation** for the trend you described. Make sure to note any assumptions you are making in this interpretation of the data.

   (approximately 200 words)

4. **Make a recommendation based on the results of your analysis.**
   - Describe who you are making the recommendation to and what should they do.
   - Explain how the recommendation will lead to some benefit or prevent some harmful effect.
   - Explain how your recommendation is supported by your analysis of the data, or what else might need to be investigated in order to make a stronger recommendation.

   (approximately 100 words)

Step 5: Submission

Copy your visualization and written responses into a single document. Ask for specific instructions on how to submit this single document.

Rubric - Tell a Data Story

Criteria	Low	Medium	High
Visualization			
The visualization demonstrates proficiency with the computational tools used to create it.			
The visualization follows good design principles.			
The visualization provides insight into a trend or pattern in the data.			
Reflection			
The response clearly describes the source of the data used to create the visualization.			
The response clearly describes the iterative development process used to create the visualization.			
The response clearly describes the relationship, trend, or pattern shown in the data and provides a possible explanation, while noting assumptions.			
The response makes a recommendation, indicates potential benefits of that recommendation, and explains how the recommendation is supported by the provided interpretation of the visualization.			