**Grade 12 Statistics - Modeling Data**

**Common Core State Standards:**

CCSS.Math.Content.HSS.ID.A.1  
Represent data with plots on the real number line (dot plots, histograms, and boxplots).

**Learning outcomes:**

* Students will be able to identify data represented as a histogram for univariate data.
* Students will be able to create graphical representations of the data.

**Formative Assessment will focus on:**

Survey sampling and creating histograms based on the data they gather.

**Context and Logistics statement:**

This assignment would work well as a review activity before a unit exam. The activity brings together everything that would be discussed in the unit. Students will first have to interpret the histogram distribution they are assigned and then they have to create the histogram from the data that they gathered. This has them both creating and interpreting histograms, which would be two of the key ideas in this unit.

**Task Plan**

Students will be assigned a distribution and work with a partner to determine a quantitative variable that might take on this distribution. The will then come up with a survey question to ask their peers to gather information on the variable of interest.

Students will then have ~10 minutes to collect data from their peers, then come back together with their partner to combine and model their data to present to the class.

Students with attempt to model one of the following distributions: Bimodal, Normal, Left and Right Skewed

Examples for Bimodal: heights, weights, shoe sizes, time spent getting ready in the morning

Examples for Normal: SAT scores, spending per month, amount of money spend on food per week, GPA

Examples for Right Skewed: distance travelled to school every day, number of pets, number of siblings

**Handouts and Supplemental work**

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Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_

Create your histogram in the space below.

Questions:

1. Did your data actually give you the correct type of distribution? How do you know?

2. If not, what are some possible reasons that your data did not match the distribution that you expected it to?