**Learning Outcomes:**

* Students will understand inherent bias in data visualizations in order to be informed digital citizens.
* Students will learn strategies to read and analyze data visualizations in order to meet their information needs.
* Students will learn the elements of design in order to create appropriate visualizations.

**Assessment Tools:**

* Activity #1: <http://bit.ly/DataVizActivity_1>
* Activity #2: <http://bit.ly/DataVizActivity_2>
* Feedback: <https://libguides.lmu.edu/digcitizen/feedback>

**Outline**

1. Introduction - **10 minutes** 
   1. Workshop agenda and learning outcomes
   2. What is a visual? What is the purpose of a visualization?
      1. Shallow vs. Deep Images (shallow are intended to entertain / aesthetic vs. deep are intended to inform and help readers grasp a concept)
         1. For Deep images: purpose to inform vs. manipulation / mislead
2. Basics - **15 minutes** 
   1. Parts of a visualization
   2. Principles (gestalt, color, size)
3. Spotting misleading visualizations - **7 minutes** 
   1. The DIG (digital image guide) method for evaluating visualizations. Instruction outline with activities here: <https://digitalcommons.murraystate.edu/cgi/viewcontent.cgi?article=1076&context=faculty>
   2. Activity #1 - **10 minutes**
      1. **Link:**<http://bit.ly/DataVizActivity_1>
      2. Group discussion/review of why each visualization is bad/how it can be made better
   3. Activity 1 discussion - **5-10 minutes**
4. Choosing best form - **10 minutes** 
   1. Types of visualizations
      1. Bar, line, pie, dotted, etc.
   2. Activity #2 - **10 minutes**
      1. **Link:**<http://bit.ly/DataVizActivity_2>
   3. Activity 2 discussion - **5-10 minutes**
5. Wrap-Up - **5 minutes** 
   1. Link to other resources
      1. Tools for creating visualizations (Tableau, Excel, R, etc.)
   2. Summative Assessment