

Title: Physical Infographics

Topic: How to discover new ways to represent data using the familiar, physical world

Materials:

- Supplies such as colored paper, chalk, balloons, masking tape, markers, plates, and anything else appropriate can be presented to the students to inspire ideas.
- Large (ideally outdoor) space for students to work
- Preselected compelling datasets printed as handouts, such as injury/mortality rates, city/state data, teen technology use, data that represents trends over time or between demographics.

Timeframe: 60-120 minutes

Description: The end goal is for students to find and represent data using objects or drawings with the physical world as their backdrop. The inspiration for this lesson comes from Jose Duarte (<https://www.flickr.com/photos/joseduarteq/>), who would use chalk, paint, or every day objects on things such as sewer covers, brick paths, and natural elements. The data Duarte represented would usually deal with the city in which the object was set, such as water usage data on the sewer covers, or population data on the paths. Working in groups, students will mimic this by first finding data they would like to represent graphically and then discuss how they could represent this.

- Explore the Jose Duarte site as a class. Discuss the types of representations and the materials and methods used to create them
- Break students into groups of 3-4. Allow them 5-10 minutes to select data and come up with a rough idea of what they would like to visualize.
- Allow students to walk around and decide where and how they should represent their data (keeping in mind not to deface property, at least not without the owner's permission). It is important to emphasize that the data representation must be accurate to the data.
- Next, they will collaboratively create their graph with the various materials provided. A good rule of thumb to make sure that students take advantage of the physical materials and space is to require that the visualization must be at least 5 feet by 5 feet.
- Students should present out their infographic to the other groups of students.
- Once finished, the students should take a clear photograph of the representation.
- Finally, they will use a graphic program to add an overlay to the information and present to the class.
 - Note, this last step could be done physically on the graphic as well if there is no access to a program, or to add context to the physical element if others are to see it.

Notes from Facilitation: To save time, have students choose data from a preset list to represent for the activity, and be prepared to offer representation ideas for groups that are stuck.



Below are examples of graphs created, without the contextualizing information overlay:

