

Instructional Day: 10

Topic Description: Points of view: Telling a story with data

Objectives:

The students will be able to:

- Explain how different views of data can tell a different story
- Recognize that data is an incomplete record of reality
- Describe the limits of measurement (what can and can't be captured in data)

Outline of the Lesson:

- Journal Entry (10 minutes)
- Room Activity (45 minutes)

Student Activities:

- Complete journal entry.
- Groups complete first part of Room Activity.
- Groups share responses with another group.
- Groups complete second part of Room Activity and share responses.

Teaching/Learning Strategies:

- Journal Entry: What do you think about when you hear the word data? Where can it be found? Where does it come from?
 - Class discussion of journal entries
 - Write down ideas from students.
 - Emphasize that this lesson is meant to stretch their thinking about data.
- Room Activity
 - Assign various groups different versions of the Room Activity.
 - Depending on the amount of time available and the size of the class, you can have some students work with the picture (in the Supplemental Materials) and some work with the entire word list OR you can assign different subsets of the word list to different groups of students.
 - When each group is finished with their first 4 instructions, have them compare with a group that has a different version.
 - Have groups share their answers to #2 with the entire class.
 - Show groups the different versions of the room.
 - Have groups complete questions 5-7.
 - Have some groups share their answers for 5-7
 - Emphasize that the appearance of the data and amount of data collected inform the inferences that can be made.

- Homework: Complete Communications Methods and Data Chart and Data Journal
 - Explain that they will be adding to the Communications Methods Chart of the previous day by adding information about data.
 - Introduce the Data Journal.
 - Both of these assignments will be due on the first day of Unit 2.
 - Clarify questions.

Resources:

- Room Activity Picture (Supplemental Materials)
- Room Activity Picture Instructions (to go with the picture)
- Room Activity Entire Word List
- Room Activity Possible Word Subsets
- Communications Methods and Data Chart
- Data Journal

Room Activity Picture Instructions

Look at the picture displayed on your computer or on the handout provided.

1. Make a list of the objects in the picture.
2. What does this data tell you about the person who lives in this room? What does it not tell you?
3. What are most of the items in this room related to?
4. How many toy soldiers are there?

Now compare with the other group.

5. Are there any advantages to one representation or another?
6. Do you think different representations can tell different stories?
7. What do you think came first the drawing of the room or the list?

Room Activity Entire Word List

Look at the following list of items found in someone's room.

Laptop	Globe
Nintendo DS	Person
Mobile phone	Paintings (2)
iPod with ear buds	Shoe
PS3	Burger
Radio (2)	Books (75)
Television	Pizza
Toy Car (3)	Guitar
Calendar	Sandwich
Ribbons (3)	Goldfish
Sprite Can	Toy soldiers (3)
Plaques (3)	Pringles can
Gold Medal	
Phone	
Mug	
Trophy	
Picture Frame	
Posters (8)	
Harry Potter poster	
Lava lamp	
Glasses	
Violin	

1. Draw a picture of the room including each of the items from the list above.
2. What does this data tell you about the person who lives in this room? What does it not tell you?
3. What are most of the items in this room related to?
4. How many Radios are there?

Now compare with the other group.

5. Are there any advantages to one representation or another?
6. Do you think different representations can tell different stories?
7. What do you think came first (the drawing of the room or the list?)

Room Activity Possible Word Subsets

1. Lava lamp, Books (10), Burger, Cell phone, Pringles can, Television, Calendar, Glasses, Lava lamp, Sandwich, Pizza, Paintings (2), Person, Sprite Can
2. Trophy, Pizza, Guitar, Sandwich, IPod with ear buds, Radio(2), Toy soldiers(3), Person, Shoe, Cell phone, Violin, Harry Potter poster, Ribbons(3), Sandwich, Laptop, Goldfish
3. Books (75), Burger, Globe, Gold Medal, Goldfish, Harry Potter poster, Phone, Paintings(2), Person, Plaques(3), Posters(8), Ribbons(3), Toy soldiers(3), Trophy, Violin
4. iPod with ear buds, Television, laptop, Radio(2), Cell phone, Guitar, Toy Car(3), Nintendo DS, PS3, Burger, Pizza, Person, Pringles can, Sprite Can
5. Word cloud pictured below.



Communication Methods and Data Chart

Let's look at what kinds of data you 'give off' when using the different forms of communication. For each of the following examples, fill in the table below with which method you would choose for the given scenario and why (You should already have completed that part.). Keep in mind that "data" here is not just the content you communicate (what you say or write) but could also refer to details like the time of a telephone call and the number.

The methods are:

- **Texting**
- **Phone call**
- **Talking in person**
- **Facebook**
- **Twitter**
- **Email**

Scenario to communicate	Method	What data is available?	Who has access to the data?	What can be learned from the data in aggregate?	Why you chose this method
1. Breaking up with a significant other (boyfriend/girlfriend)					
2. Asking parents' permission to do something when you think they will likely say 'no'					
3. Figure out where and when to meet a friend to see a movie					
4. Gossip about someone who could hear you if you spoke					
5. Gossip about someone not around you					
6. Getting help on homework					

7. Feedback on a big decision (like what color prom dress, what game to buy, what phone to get)					
8. Announce you met someone famous					
9. Complain about your parents					
10. Mourn someone you lost					
11. Buy something from someone you don't know well					

1. How does the type of data being exchanged affect which method you choose?

Name _____

Data Journal

During the next several days, take note of situations when you “generate data”. We’re looking for specific moments when some activity you perform can be observed, recorded and, possibly, combined with similar data from others. Ideally you will carry this paper with you and take notes over the course of your day. To start you off, think about what happens when you ride the bus or make a telephone call or browse a web site!

Time	Describe what you did to generate data