**Daily Lesson Plans**

**Instructional Days:** 1-2

**Topic Description**: This lesson sets the stage for the unit. It provides an overview of data collection and problem solving that will be needed in order to complete the final project.

**Objectives:**

The student will be able to:

* Recognize various forms of communication as data exchange.
* Describe the implications of data exchange on social interactions.
* Consider privacy of data that they create.
* Explain the difference between data used for making a case and data that informs a discovery.
* Describe good research questions.

**Outline of the Lesson:**

* Communication Methods and Data Chart (15 minutes)
* Data Journal (15 minutes)
* How data is linked back to us (25 minutes)
* Solving Community Problems Activity (25 minutes)
* Difference between data used for making a case and data that informs discovery (15 minutes)
* Research questions (10 minutes)
* Journal Entry (5 minutes)

**Student Activities:**

* Discuss Communications Methods and Data Chart with elbow partner.
* Discuss Data Journal with elbow partner.
* Groups complete Solving Community Problems activity.
* Complete journal entry.

**Teaching/Learning Strategies:**

* Have students share their Communications Methods and Data Chart with their elbow partner.
* Remind students that this was assigned as homework in Unit 1.
* Have a few students share “What data is available?”, “Who has access to the data?”
* Data Journal Class Discussion
* Have students:
* Compare journals with elbow partners.
* Write down 5 ways that they give off data.
* Take time to discuss what these data sources might tell us about ourselves if we “aggregated” or collected these data from lots of people – What good might be done? What services might be improved?
* Think about which of these ways can be linked directly back to them. What are possible implications of the data being linked back to them?
* Have students read this article about aggregate search data—technically, making search data available to researchers would help improve search engines, but it turns out that search history is intensely personal. [http://www.nytimes.com/2006/08/09/technology/09aol.html](http://www.nytimes.com/2006/08/09/technology/09aol.html%20)
* The Netflix prize is another example. It has recently been cancelled due to FTC concerns over privacy. <http://blog.netflix.com/2010/03/this-is-neil-hunt-chief-product-officer.html>
* Volunteering data on Facebook and other social networking sites might tell people more about you than you intend. [http://www.nytimes.com/2010/03/17/technology/17privacy.html](http://www.nytimes.com/2010/03/17/technology/17privacy.html%20)
* Solving Community Problems
* Present students with a scenario related to the local community. For example, the city council wants to find out about trash disposal in the community in order to clean up the streets.
* Have students work in groups of 3-4 to outline how they would
* Approach the problem
* What kind of data they might need to collect
* How they would collect and analyze the data
* Lead a discussion to get at their thoughts. Highlight the differences between making a case and discovery. How would the choice between these determine the kinds of data you would collect?
* Making a case (advocacy)—Use data to document situations that contribute to make a positive or negative case for something. (e.g., Let the Metro know about timing of trains and buses; tell the principal about something that needs to be done at the school; tell someone about something you’d like to see continued.
* Discovery—Collect data to document situations and then use the data to learn something. (e.g., could your food choices be improved?; do I always take an efficient route to activities?)
* What research questions might you ask in each case?
* What is your research question?
* Why did you choose to collect these data for this question?
* What are the limits of this data?
* What can you confidently say based on your data?
* What perspectives are left out based on your data?
* ~~Assignment (will be used for the Unit 2 final project)~~
* ~~Every day collect data related to where you go after school—location, means of transportation (walk, bike, etc.), how long it takes to get from one location to the next,~~
* Journal Entry: What are the steps you use to solve a problem?
* Ask students to reflect on whether these steps are the same in all types of problems they solve.

**Resources:**

* Communication Methods and Data Chart
* ~~Data Journal~~