



Computer Science Virtual Learning

PLTW Computer Science Principles

May 19, 2020

Lesson: May 19, 2020

Identifying People and Data

Learning Target:

- **Explain privacy concerns that arise through the mass collection of data**
- **Use online search tools to find and connect information about a person or topic of interest.**
- **Explain how multiple sources of data can be combined in order to uncover new knowledge or information.**
- **Analyze the personal privacy and security concerns that arise with any use of computational systems.**



Introduction

Explore: [World's Biggest Data Breaches Visualization](#)

Click the link and learn about each of the Data breaches and the effect that they had on our society:

- **What kind of data is being lost? And how much?**
- **What kinds of issues could arise from this data getting into the wrong hands?**

Introduction

Journal about these data breaches in your computer science notebook. Consider the following key points while you are journaling:

- **All kinds of personal data, from usernames to social security numbers and credit card information, is lost fairly regularly.**
- **This information can be used to steal money or identities, get access to classified information, blackmail people, etc.**



Practice: Data Privacy Lab

We've spent a lot of time looking at potential benefits of collecting and analyzing data. As we've already seen today, however, there are some risks associated with collecting all of this information. If it falls into the wrong hands or is used in ways we didn't intend, there may be serious risks imposed on our privacy or security. We're going to start looking more deeply at this problem.

In the data breaches we just looked at, some fairly important pieces of information were stolen. Credit card numbers, passport information, or government security clearances are obviously not something we'd like to fall into the wrong hands. Other pieces of information, however, don't seem that bad. So what if people know your ZIP code? So what if people know your birthday? This is information we usually share without a second thought.



Practice: Data Privacy Lab

Click this [link](#) and navigate to the Data Privacy lab Website.

- ❖ Type your information (birthday, ZIP code, and gender) to determine how many other people share those characteristics.
- ❖ In most instances, you will find that those three pieces of information can uniquely identify you.



Practice: Data Privacy Lab

Thinking Prompt:

- **"Why is it significant that you are one of only a few people with your birthday, gender, and ZIP code? What concerns does this raise?"**



Practice: Data Privacy Lab

Consider these points and journal in your computer science notebook:

- **We can be uniquely identified from just a few pieces of information.**
- **Even information we would not normally consider to be “sensitive” can still be used to identify us.**
- **There are security and privacy concerns raised as a result of most information about us being available online.**



Practice: Research Yourself Online

Make a copy of the [Research Yourself Online Activity Guide](#)

- You will work individually and will need access to a computer and the Internet. You will be asked to research yourself online, making note of any and all pieces of information you are able to find. Some guidelines follow:
- You should focus your attention on information that is already publicly available (e.g., through a Google search, on the public pages of your school website, a social network, etc.)
- If you are prevented from accessing some sites, you should still list information you know is publicly available elsewhere.
- Students should try to make connections between the data they find. “If I knew this about me and that about me, then I’d also know ...”

Wrap-Journal and Share

- ★ **Using the following prompt, create a journal entry in your computer science notebook:**
 - **"What information were you able to find about yourself? Were you able to make connections in the data you collected to figure out anything else? Were you concerned about anything you were able to find?"**

Wrap-Journal and Share

- ★ **Discuss these topics with your family and friends:**
 - ★ **A great deal of information about us is freely and easily available online.**
 - ★ **By making connections in this data or to other sources of data, it is possible to form a more complete picture of who we are and what we do.**
 - ★ **There are security and privacy concerns raised by the data we post online about ourselves.**