



PBL Project

Shelby Lindaman

6 Math teacher at Prairie Ridge Middle School in Ankeny

2021 extern at Iowa Library for the Blind



Part I: Overview of Workplace

The Iowa Library for the Blind is the primary location for blind individuals to obtain reading and instructional materials in Braille, large print and audio. The library offices are located on the first floor of the building, instructional materials offices on the fourth floor with the stacks throughout the inner workings of the building. The primary focus in the summer is the youth reading program. Through this program, materials and a Zoom link are sent weekly to each student to complete at home activities and participate in a read aloud as well as follow along with the instructors to complete the activities.

Second floor is the orientation center where the instructors teach blind people using the structured discovery model. They take classes in travel, technology, home management, wood shop, business and Braille. All staff members train in the orientation center while wearing sleep shades.

Part II: Workplace Focus

For the first week, I was a student in the orientation center where I was constantly utilizing and fine tuning my problem solving skills all while embracing the teachings around having a growth mindset around capabilities of blind people.

After the orientation training I began working with the youth program, specifically their summer reading program. Here we created tactile lessons for students, gathered the materials needed to send to students and pulled books to send them according to their needs, reading level and interests.

Part III: Introduce the Problem

One of the staff members at the library explained to me that most of the websites that stored COVID-19 statistics and graphs for the state and nation, were not accessible to blind people because they did not use universal design to create the websites. This inspired my PBL topic.

I will share this example with students and then present with the question: *How could you represent data you collect non-visually so that it is accessible to blind people?*

Students will determine a statistical question, gather their data and then work to represent it non-visually.

Part IV: Standards, Driving and Essential Questions

Standard

CCSS.MATH.CONTENT.6.SP.B.4 – Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

Learning Targets

- I can represent numerical data in an organized, non-visual way.
- I can draw conclusions about my data from my representation.

Driving and Essential Questions

- ✓ What are some ways that we can represent data?
- ✓ What is the best way to represent the specific data you collected?
- ✓ How can we display the data so that blind people can interpret it?
- ✓ Why is making your data accessible important?
- ✓ What conclusions can you draw about your statistical question from your representation?

Part V: Extern Host Role

I would like for my students to present their data displays to the public, especially to students from the orientation center. To get the orientation center involved, I would reach out to Al Bickell, the orientation center administrator, to set up a time for his students to come to Prairie Ridge, talk to my students and give feedback about their data displays. I know that this would be a rich and meaningful experience to everyone involved.

Part VI: Student Learning

CHOICE – Students will choose their statistical question and the way they represent their data.

REVISION – After the students at the orientation center give feedback about the representations, students will be able to revise their project.

REFLECTION – Students will participate in self reflection in comparison to the proficiency scale of the standard being measured. I will also prompt students with reflection questions to help guide their discovery and learning.