Temperature Activity Lesson Plan

Grade Level & Subject Area: 8th Grade Math

Standards/Framework (State Standards, Content Standards, InTASC Standards)

Theme/Series of Lessons:

This is part of graphing plots of data/drawing conclusions series.

- **AR.Math.Content.8.F.B.5:**
  - Describe the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear)
  - Sketch a graph that exhibits the features of a function that has been described verbally
- **AR.Math.Content.8.EE.B.5**:
  - Compare two different proportional relationships represented in different ways (graphs, tables, equations)
- **8-PS4-1**:
  - Use mathematical representations to describe and/or support scientific conclusions and design solutions.

Time:

2nd Lesson out of two dealing with graphing plots of data. Hour and 15 minute class period.

What do the students already know?:

The previous day students were taught or retaught how to graph data in either a line, bar, or pie graph. They should be able to do it by hand, and be able to make conclusions based on what the graphs say.

Objective: Students will continue to show their knowledge in graph creation and drawing conclusions based on those graphs.

Materials:

- Student Devices (Laptops or iPads)
- Google Sheets
- Google Docs
- Projector
- Notes from yesterday
- Data sheet
- Project files to work on after completing in class assignment

Procedure:

1. Students will come into class and have their device ready.
2. I will recap what the students learned the previous day
3. I will introduce sheets, and I will have them follow my steps as we set up with formulas.
4. After Google sheets is set up I will pass out the data sheets to student (each one has a different set of cities)
5. I will explain what they need to do.
6. After they enter data sets, they will follow my steps in setting up graphs and charts
7. After students complete this in class assignment they can work on their project that I assigned the previous day.

Assessment:

Google Sheets is not the assessment, although it is good practice to enter data, the assessment as I want to see their conclusions based on the charts we make together in class based on their individual data that was given to them.

A Brief Description Of The Entire Lesson - Plus Any Additional Information to be Included:

Students will come in and look at the board that tells them what materials they need out. As the bell rings I will begin by recapping yesterday's lesson, and I will have students work a few graphing problems based on data given. I will have students solve on the board once done. I will also mention that we are going to create a google sheets page and graphs together today. Invite students to open google sheets on their devices. I will tell them to follow my steps closely as we set up the sheet. As we put in formulas I will explain what will pop up in these once data is entered. I will then pass out data sheets that contain temperatures for major US cities (each data set is unique, there are 10 cities on each data set, and not one data set is identical). As students enter data, I will point out that they should be seeing changes in some of their columns (Average, High, Low). Once every student has entered data, I will slowly walk them through how to set up their graphs and charts, as it is very complicated. Once that is complete, I will have students share with me their sheets and I will pull up an assignment on the projector, where they have to answer questions based on the graphs and data they just entered. I will ask them to complete it in Google Docs and share it with me when they are done. I will then instruct them to keep working on their project. I will also be available for any questions or help if they need it.

The complete April 1st Temperature Sheets is an example of a student work form a previous year.