

Name	Drew Willems
Lesson Title	Temperature vs Water Use
Grade and Subject	9th Grade - Math 1
Standard	<p>S-ID - Summarize, represent, and interpret data on two categorical and quantitative variables.</p> <p>6c - 6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.</p> <p>c. Fit a linear function for a scatter plot that suggests a linear association.</p> <p>Standards For Mathematical Practice:</p> <ul style="list-style-type: none"> • Make sense of problems and persevere in solving them • Reason abstractly and quantitatively • Use appropriate tools strategically
Essential Question	Is there a correlation between the amount of water that the city of Napa uses and the temperature?
Objective	<ul style="list-style-type: none"> • Students will be able to use data to create a data table • Students will be able to create a scatter plot based on data provided to them • Students will be able to analyze the scatter plot to identify trends and make predictions • Students will be able to calculate a balance point • Students will be able to draw a line of best fit
Outline	<p>The activity will begin with a brief introduction into the water treatment process of how water is delivered to the citizens of the Napa.</p> <p>Students will be working with a partner to complete this activity. They will be given data of water use from the City of Napa for the year of 2018 by month and weather data (temperature) for the city of Napa by month.</p> <p>Working together...</p> <ul style="list-style-type: none"> • They will identify the mean water use in the city of Napa by month from the water data • They will identify the mean temperature in the city of Napa by month from the weather data • They will create a table with the information creating 12 data points • With those 12 data points, students will create a scatter plot in google sheets • Students calculate the balance point from the data • Students draw in a line of best fit • Students answer a series of questions relating to the scatterplot and data
Assessment	Students will be assessed informally throughout the activity. At the end of the activity students will be turning in a project handout (google doc) that includes the table, the scatterplot, the calculations and answers.
Materials / Resources	CPU or activity handout, Water data from City of Napa Water, Weather data by month for the City of Napa, calculators

Needs/Host Org Requests	Data from City of Napa Water for daily water use for the year of 2018.
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