Subject	Mathematics
Grade	9-12
Topic Topic	Hate Crime Analysis. Post 9/11
Number of	4
Lessons	
Unit Summary	Students will explore the possible causes for the increase of hate crimes
Onti Summary	between 2000 and 2001 as well as compare the individual groups that were affected by September 11 <sup>th</sup> using their own models. Students will analyze data related to Hate Crime Incidents in California based on bias motivation.
Common Core	
Standards Addressed	S.ID.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
	S.ID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
	High School: Statistics and Probability Interpreting Categorical and Quantitative Data
	CCSS.MATH. CONTENT.HSS.ID.A.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
	CCSS.Math.Content.HSS.ID.A.3: Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
Learning Objectives	<ol> <li>Students will compare hate crimes incidents based on race and religion between the two years.</li> <li>Students will create their own data representation model to compare and contrast the spikes in hate crimes before and after September 11<sup>th</sup>.</li> <li>Students will explore how hate crimes increased between the years 2000 and 2001.</li> </ol>
Essential	
Learning	<ol> <li>Students will understand how to interpret data.</li> <li>Students will make sense of data.</li> <li>Students will make inferences about the causes for the trends or spikes in the data.</li> <li>Students will compare and contrast two data sheets.</li> </ol>
Materials	<ul> <li>Materials provided:</li> <li>1. "A Citizen Fights for His Civil Rights after 9/11" article</li> <li>2. Academic Vocabulary Study Sheet</li> <li>3. "After Words: September 11, 2001" poem</li> <li>4. Chin Ileto Graphic Organizer</li> <li>5. Culminating Task Handout</li> </ul>





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	6. Gallery Walk handout
	7. Hate Crimes Box and Whisker Plot handout
	8. Hate Crimes Data Analysis Compare and Contrast Form
	9. Hate Crimes Data 2000
	10. Hate Crimes Data 2001
	11. Homework Assignment
	12. " <u>Joseph Ileto</u> " Story
	13. Scatter Plot and Linear Regression handout
	14. "Vincent Chin" Story
	15. "Who Took the Rap? A Call for Action" article
	Materials not included:
	1. Chart Paper
	2. Markers
	3. Poster Paper
Vocabulary	Lower Quartile
, some many	2. Maximum
	3. Median
	4. Minimum
	5. Outliers
	6. Range
	7. Upper Quartile
	7. Opper Quartile

#### LESSON PLANS

**LESSON 1:** Analyzing Data after 9/11

Recommended Time: 100 minutes

# <u>California Common Core State Standards for Algebra 1</u>: S.ID.3 Interpret differences in shape, center, and spread in the context of the data sets,

accounting for possible effects of extreme data points (outliers).

Prior Knowledge: Students need to know different ways to represent data (i.e., Pie Charts, Column/Bar graphs, scatter plots, histograms)

## Materials:

- Academic Vocabulary Study Sheet
- Hate Crimes Data Analysis Compare and Contrast Form
- Hate Crimes Data 2000
  - Source: https://www.fbi.gov/about-us/cjis/ucr/hate-crime/2000/hatecrime00.pdf p.12
- Hate Crimes Data 2001
  - Source: https://www.fbi.gov/about-us/cjis/ucr/hate-crime/2001/hatecrime01.pdf p.14
- Markers
- Poster Paper
- "Who Took the Rap? A Call for Action" article





#### Activity 1: Quickwrite: Think-Ink-Pair-Share (15 Minutes)

Have the following statement written on the board:

#### Think about the statement below:

- "...it was the argument of Peggy Noonan, a *Wall Street Journal* columnist who claimed that we must all 'accept the necessity of racial profiling.'
  - --Do you agree or disagree with Noonan?

Ink-Have students write their response to the question

Pair-Have students turn to a partner and share their response

#### **Share**: (Whole Class)

- -Class survey: Have students raise hands whether they agree or disagree with Noonan. Write results on board. Have a discussion about the results.
- -Come up with a class definition of racial profiling

#### Possible discussion questions:

- -What would prompt Noonan to feel that racial profiling is a necessity?
- -Who do you think are victims of racial profiling?
- -Have you ever seen/experienced racial profiling?

#### Activity 2: Data Analysis: In Pairs (15 minutes)

Provide students with Hate Crimes 2000 and 2001 report and the Hate Crimes Data Analysis Compare and Contrast Form to fill out. Have students share-out answers to Compare and Contrast form.

## Activity 3: Article Reading: "Who Took The Rap? A Call to Action" (15 minutes)

-Before reading the article:

Have students rate their understanding of each term on the Academic Vocabulary Study Sheet. As a class use the rating scale to define and deepen their understanding of the vocabularies.

- -Have students individually read the article and write three questions pertaining to the article. (Level questions)
- **-Class discussion of the article.** As a group discuss the questions written and select one question to discuss as a whole.

## Activity 4: Data Representation (30 minutes)

In groups have students look at the data again and assign each group one of the following Bias Motivation strands:

- -Anti-Islamic
- -Anti-Black
- -Anti-White
- -Anti-Asian/Pacific
- -Anti-Jewish
- -Anti-Multiracial





Students will compare 2000 and 2001 data and determine the best way to represent their data. They will create a poster to represent their data as well as a description of the similarities and differences.

Activity 5: Class Presentation: Gallery Walk (10 minutes)

Activity 6: Revisit Quickwrite: (5 minutes)

Make changes or add to your quickwrite to support your opinion of racial profiling.

Activity 7: Project introduction: (10 minutes)

- -Popcorn Read "After Words: September 11, 2001" poem
- -Introduce students to Culminating Task: "What is YOUR story? How will you tell your story? And how will you turn ideas into actions?" ("Who took the Rap? A Call to Action")

**LESSON 2:** Box and Whisker Plot

#### California CC Standards for Algebra 1:

S.ID.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.

**Prior Knowledge:** Students need to know how to represent data using a box-and-whisker plot and how to identify outliers.

## <u> Prior Knowledge Vocabulary:</u>

maximum, minimum, median, range, upper quartile, lower quartile, and outliers

#### Materials:

- "A Citizen Fights for His Civil Rights after 9/11" Article
- Chart Paper
- Gallery Walk
- Hate Crimes Box and Whisker Plot handout

## Activity 8: Read and Reflect

Article reading: "A Citizen Fights for His Civil Rights after 9/11" (10 minutes)

- Have students' jigsaw read the article.
- Assign each group one of the sections to read.
  - Each member will choose one of the following roles in order to present their findings to the class. Roles can be modified.





- Role #1: Instagramer –provides a visual representation
- Role #2: Tweeter-134 character summary
- Role #3: Reporter-Develops a news heading
- Role #4: Statistician-Presents the main idea without bias
- Role #5: Researcher-creates meaning to unclear terms
- Gallery Walk (15 minutes)
- After the gallery walk: Have students answer the following question: (5 minutes) What would you stand up for?
- Have a few students share responses (5 minutes)

#### Activity 9:

In groups have students work on the Hate crimes Box and Whisker Plot Handout (30 minutes)

#### Activity 10:

Exit slip: How can you identify outliers? (5 minutes)

**LESSON 3**: Scatter Plot and Linear Regression

Suggested Time: 60 minutes

#### California CC Standards for Algebra 1:

- 1. S.ID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
- 2. S.ID.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
  - a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear and exponential models.
  - b. Informally assess the fit of a function by plotting and analyzing residuals.
  - c. Fit a linear function for a scatter plot that suggests a linear association.
- 3. S.ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

## Prior Knowledge:

Students need to know how to create a scatter plot and find the linear regression of the data set. (Adjust for time if using this lesson to teach linear regressions)

## **Materials**:

- Chin Ileto Graphic Organizer
- "<u>Joseph Ileto</u>" Story
- Scatter Plot and Linear Regression Handout
- "Vincent Chin" Story





#### Activity 11: Read and Reflect

With a partner have each student read one of the stories. (25 minutes)

- Ex. Partner A reads "Vincent Chin" Story and Partner B reads "Joseph Ileto" Story
- Each student completes the Chin Ileto Graphic Organizer
- Once they are done they share with their partners and discuss similarities and differences
- Discuss as a whole class

#### Activity 12:

With a partner have students work on the Scatter Plot and Linear Regression handout (30 minutes)

## Activity 13: Homework (5 minutes)

Materials

Homework Assignment

Have students research a hate crime incident between 1996-and 2013 and write a summary of the incident and why it's important to them.

**LESSON 4:** Culminating Task

Suggested Time: 30 minutes

## California CC Standards for Algebra 1:

- 1. S.ID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
- 2. S.ID.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
  - a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear and exponential models.
  - b. Informally assess the fit of a function by plotting and analyzing residuals.
  - c. Fit a linear function for a scatter plot that suggests a linear association.
- 3. S.ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

## **Materials**:

Culminating Task Handout

## Activity 14:

Provide students with the culminating task handout and discuss requirements for their final project.



