

# TEACHER GUIDE

# SELMA

## GERRYMANDERING

Video Lessons, Teacher Guide, and Student-Led Activities

Created with the Ron Clark Academy (Atlanta, GA)

Updated 10/20/2020

## UNDERSTANDING GERRYMANDERING

# TEACHER GUIDE

## UNDERSTANDING GERRYMANDERING

### DEAR TEACHER.

In this lesson, students will be able to define and construct portmanteau words using the accompanying guide. Students will also gain knowledge about the etymology of the word *gerrymandering* and recognize its importance around voting.

#### BACKGROUND INFORMATION:

**Gerrymandering** – drawing political boundaries to give your party a numeric advantage over an opposing party.

**Portmanteau** – The original use of the word portmanteau meant “a large suitcase or trunk with hinged compartments opening in two halves for easy access.” The word’s meaning has evolved and now refers to a word that blends the sounds and combines the meanings of two other words.

The students’ understanding of this literary device is fundamental to their understanding of the main concept of the lesson, which is their understanding of gerrymandering (a portmanteau word).

#### PROCEDURES:

##### 1. Play Part I of the video.

##### 2. Student Activity.

- Pause the video when prompted and use the accompanying handout to facilitate student practice centered on constructing portmanteaus in a variety of ways.
- Have students complete the first two sections of the handout independently as they work on constructing and deconstructing portmanteau words.
- Upon completion, explain to students that they will have the opportunity to create their own portmanteau words using items found within the classroom.

# STUDENT ACTIVITY

NAME \_\_\_\_\_

## PORTMANTEAU

“When two become one”

**A portmanteau word is one that blends the sounds and combines the meanings of two other words.**

Identify the portmanteau words for each combination.

Electronic + Mail = \_\_\_\_\_

Math + Athlete = \_\_\_\_\_

iPod + Broadcast = \_\_\_\_\_

Guess + Estimate = \_\_\_\_\_

Identify which words were combined to create the portmanteau.

\_\_\_\_\_ + \_\_\_\_\_ = smog

\_\_\_\_\_ + \_\_\_\_\_ = skort

\_\_\_\_\_ + \_\_\_\_\_ = brunch

\_\_\_\_\_ + \_\_\_\_\_ = staycation

Create your own portmanteau words using items in your classroom.

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

## EXTENSION:

Create a portmanteau using the names of your classmates.

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Elbridge Gerry + salamander = **GERRYMANDERING**

Redistricting an area to include favorable voters for a politician or party (named for Governor Elbridge Gerry, who started the practice in 1812, and the salamander-shaped district he created in Massachusetts).

# ANSWER KEY

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## PORTMANTEAU

“When two become one”

**A portmanteau word is one that blends the sounds and combines the meanings of two other words.**

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Identify the portmanteau words for each combination.

Electronic + Mail = E-MAIL

Math + Athlete = MATHLETE

iPod + Broadcast = PODCAST

Guess + Estimate = GUESSTIMATE

Identify which words were combined to create the portmanteau.

SMOKE + FOG = smog

SKIRT + SHORTS = skort

BREAKFAST + LUNCH = brunch

STAY + VACATION = staycation

Create your own portmanteau words using items in your classroom.

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ *ANSWERS WILL VARY*

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

## EXTENSION:

Create a portmanteau using the names of your classmates.

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ *ANSWERS WILL VARY*

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Elbridge Gerry + salamander = GERRYMANDERING

Redistricting an area to include favorable voters for a politician or party (named for Governor Elbridge Gerry, who started the practice in 1812, and the salamander-shaped district he created in Massachusetts).

# GERRYMANDERING

## THE MATH BEHIND GERRYMANDERING

### DEAR TEACHER.

You can bring the mathematical connections from the movie **SELMA** into your classroom with this content-rich lesson. In this lesson, students will reason abstractly and quantitatively to explore the methodology of gerrymandering. After being introduced to the origins of gerrymandering and its history, students will investigate how math can further define this concept visually using geometry. They will dive deeper by supporting their reasoning using fractions and percentages as evidence. Invite your students into this journey through math activities that will develop problem-solving and analytical skills with this real-world concept.

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### ACTIVITY 1: EXPLORING DIFFERENT TYPES OF GERRYMANDERING

**GOAL:** Students will use mathematics to compare and contrast two different types of gerrymandering: packing a district and cracking a district.

#### PROCEDURES:

1. Begin the activity with a brief review of the concepts introduced in the video on gerrymandering and in the two images presented in the verzuz battle.
  2. Distribute Activity Sheet 1 displaying the verzuz battle contenders.
  3. Assign your students to small groups of two or three and encourage the students to determine which district plan is fair or less fair.
  4. Ask your students to determine who should win the verzuz battle. It is important to make sure they also use numerical evidence, such as percentages and fractions, to explain their reasoning mathematically.
  5. As a class, review each group's response before you continue playing the video. You may even want to declare a clear verzuz battle winner as a class based on the numerical evidence.
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# THE MATH BEHIND GERRYMANDERING

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## **ACTIVITY 2: USING ANALYTICS TO REDISTRICT A STATE**

**GOAL:** Students will apply mathematical reasoning and their previous knowledge to fairly draw congressional district lines for State H.

### **PROCEDURES:**

1. Begin the activity with a class discussion of what has been presented in the video thus far and remind the class of what they decided was fair or less fair when districting.
  2. Distribute Activity Sheet 2 displaying the verzuz battle contenders.
  3. As a class, look at the location of the voters for the A. Ham party and the A. Burr party. Discuss factors that can come into play when creating district lines for State H or what type of lines or figures could be best to draw when creating district lines for this state.
  4. Assign your students to small groups of two or three and have them attempt to create district lines for the state.
  5. As a class, review each group's response before you continue playing the video. You may want to display the top three districting plans on your board for everyone to analyze together.
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### **DISCUSSION QUESTIONS:**

Allow your students to discuss the following three questions in their original groups and then continue the discussion with the entire class.

- 1. Do you think that using geometric shapes when creating district lines can be considered classist, racist or ageist? Do not just answer yes or no. Explain your answer in detail.**
- 2. Does a party have to be prejudiced to gerrymander? Explain in detail why or why not.**
- 3. Are there any kinds of districts in which gerrymandering is needed or is effective? Are there any kinds of districts where gerrymandering is ineffective?**

# MATH ACTIVITY 1

NAME \_\_\_\_\_

It's a battle between the parties! Look at the two images that show congressional lines breaking State H into five districts. The votes for the **A. HAM PARTY** are shown by the gold stars and the votes for the **A. BURR PARTY** are shown by the purple stars.



★ **A. BURR** VS **A. HAM** ★

IMAGE 1

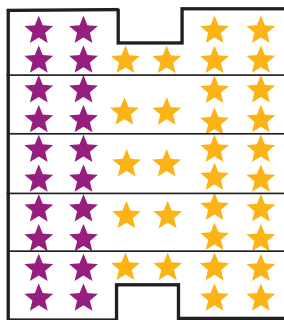
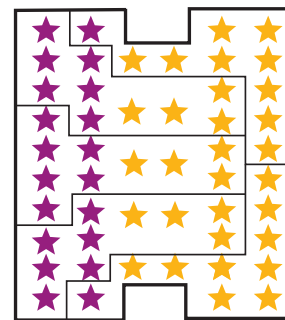


IMAGE 2



How many districts did **A. HAM** win?       
5

What percentage of the district did **A. HAM** win?      %

How many districts did **A. BURR** win?       
5

What percentage of the district did **A. BURR** win?      %

Who won this state according to this districting plan?     

How many districts did **A. HAM** win?       
5

What percentage of the district did **A. HAM** win?      %

How many districts did **A. BURR** win?       
5

What percentage of the district did **A. BURR** win?      %

Who won this state according to this districting plan?     

**Which plan is fair? Which plan is less fair? Who should win this verzuz battle?**

**Explain your reasoning with numerical evidence to support your choice.**

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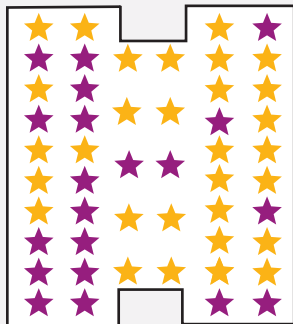
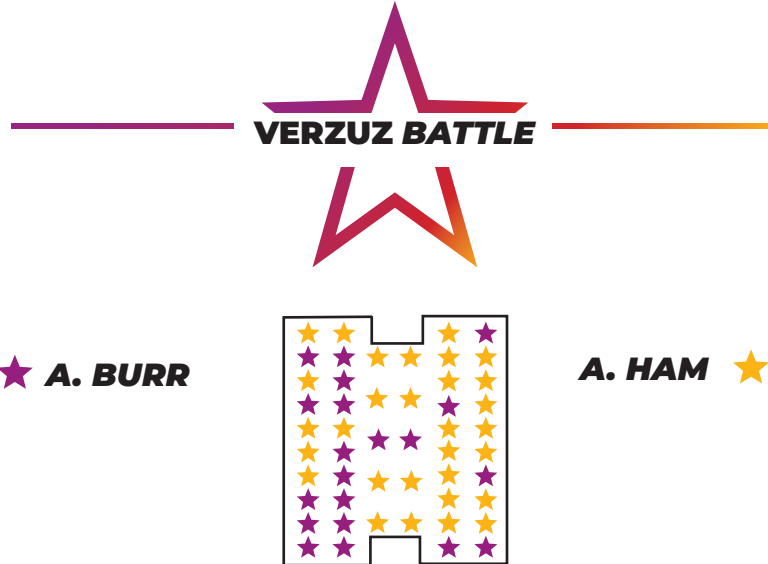
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# MATH ACTIVITY 2

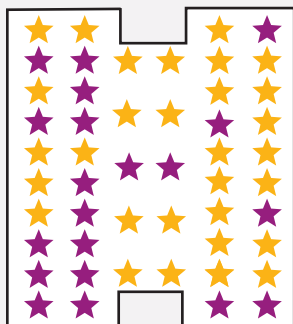
NAME \_\_\_\_\_

State H political party influencers are configured in the image below. The votes for the **A. BURR PARTY** are shown by the purple stars and the votes for the **A. HAM PARTY** are shown by the gold stars. State H will send 10 representatives to Congress. What number of seats should each party get fairly? Make sure to provide mathematical evidence to support your answer.



ATTEMPT ONE | MATH NOTES

**A. BURR** \_\_\_\_\_ **A. HAM** \_\_\_\_\_



ATTEMPT TWO | MATH NOTES

**A. BURR** \_\_\_\_\_ **A. HAM** \_\_\_\_\_



**ACTIVITY 3:  
UNDERSTANDING THE EFFICIENCY GAP**

The **efficiency gap** is the difference in the two party's wasted votes, divided by the total number of votes.

The table below shows the voters for the five districts in State H. There are **100** voters in each district which leads to **500** total voters. With 100 district voters, 51 votes are required to win. Answer the questions below and calculate the efficiency gap.

DISTRICT	A. HAM PARTY	A. BURR PARTY	A. HAM WASTED VOTES	A. BURR WASTED VOTES
<b>1</b>	60	40		
<b>2</b>	25	75		
<b>3</b>	35	65		
<b>4</b>	53	47		
<b>5</b>	41	59		
<b>TOTAL</b>				

According to the votes, A. Ham Party wins \_\_\_\_\_ seats and A. Burr Party wins \_\_\_\_\_ seats.

$$\text{Efficiency gap} = \frac{(\text{A. Burr}) \text{ Total Wasted Votes} - (\text{A. Ham}) \text{ Total Wasted Votes}}{\text{Total Number of Votes}} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

Efficiency gap as a decimal is \_\_\_\_\_

Efficiency gap percentage is \_\_\_\_\_

A maximum efficiency gap of \_\_\_\_\_ % is shown for State H.

# ANSWER KEY

## ACTIVITY 3: UNDERSTANDING THE EFFICIENCY GAP

The **efficiency gap** is the difference in the two party's wasted votes, divided by the total number of votes.

The table below shows the voters for the five districts in State H. There are **100** voters in each district which leads to **500** total voters. With 100 district voters, 51 votes are required to win. Answer the questions below and calculate the efficiency gap.

DISTRICT	A. HAM PARTY	A. BURR PARTY	A. HAM WASTED VOTES	A. BURR WASTED VOTES
1	60	40	60-51=9	40
2	25	75	25	75-51=24
3	35	65	35	65-51=14
4	53	47	53-51=2	47
5	41	59	41	59-41=18
<b>TOTAL</b>			<b>112</b>	<b>143</b>

According to the votes, A. Ham Party wins 2 seats and A. Burr Party wins 3 seats.

$$\text{Efficiency gap} = \frac{(\text{A. Burr}) \text{ Total Wasted Votes} - (\text{A. Ham}) \text{ Total Wasted Votes}}{\text{Total Number of Votes}} = \frac{143 - 112}{500} = \frac{31}{500}$$

Efficiency gap as a decimal is 0.062

Efficiency gap percentage is 6.2%

A maximum efficiency gap of 6.2 % is shown for State H.

# DIVE DEEPER

## CROSS-CURRICULAR EXTENSION ACTIVITIES

1

□ **Research** how district lines are drawn in your state, and look for examples of gerrymandering.

If you discover this tactic is being used, write a letter or even request an appointment with your state lawmakers to discuss your concerns.

4

□ **Spread awareness** about how gerrymandering can affect historically disenfranchised groups.

2

□ **Educate yourself** about candidates who are running for political office, and share what you have learned with others. If you are of voting age, make sure you are registered to vote. Then, vote for the candidates who support redistricting reform.

5

The term “redlining” refers to a process the federal government used from 1935-1940 to create maps of every metropolitan area in the country. These maps were color-coded by the federal government’s Home Owners Loan Corp. to indicate where they believed it was “safe” to insure mortgages.

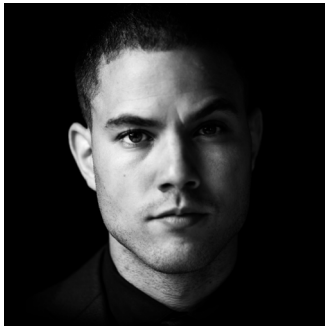
Communities with Black residents were colored red to indicate to appraisers that these neighborhoods were too risky to insure home mortgages.

3

□ **Partner with organizations** in your state that educate citizens about redistricting, and advocate for change where it is needed.

□ **Research redlining** and educate yourself about the ways it has contributed to systemic racism in our country. The book *The Color of Law* by Richard Rothstein, is a great place to start.

## UNDERSTANDING GERRYMANDERING



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## THE MATH BEHIND GERRYMANDERING



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## PREPARE FOR ACTION



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The Ron Clark Academy (RCA) is a highly-acclaimed, nonprofit middle school located in Southeast Atlanta. The Academy has received both national and international recognition for its success for creating a loving, dynamic learning environment that promotes academic excellence and fosters leadership.

THE  
**RON CLARK**  
**ACADEMY**