



Grade 10 Politics and Economics: Democracy and Gerrymandering

(Submitted by **Emily Theriault**, 2019, while serving as High School Social Studies Teacher at Cayman International School, Cayman Islands)

Tool(s) used:	<ul style="list-style-type: none"> • Sustainability Compass • Systems Iceberg • Behavior Over Time Graphs • Feedback Loops
Purpose of using tool:	<ul style="list-style-type: none"> • Generating Questions • Synthesizing Thinking • Guiding Discussion <p>Overview: The purpose of using these tools was to help students think about patterns over time, reinforcing loops and why they occur and finally to help students think about root causes.</p>
Context of lesson/case study:	Grade 10 Politics & Economics unit on Gerrymandering
Participants (# and description):	46 Grade 10 students (3 classes)
Topic, Theme, or Key Understanding of unit/project:	Democracy and Gerrymandering
Length of unit/project:	6 class periods
Resources/materials & setting required:	Videos, articles, scrap paper, PowerPoint presentation

Lesson Plan/Description of the Project:

ESSENTIAL QUESTIONS:

1. To what extent is the USA a democracy?
2. What is gerrymandering and why does it happen?
3. How do statisticians use data to “pack” and “crack” voters from opposing parties?
4. Does your vote count?

LESSON:

1. In the first lesson, students will investigate the concept of gerrymandering from a mathematical perspective. Students will see a brief intro to the concept of gerrymandering, see a few actual gerrymandered district examples and then draw district lines on an imaginary state in order to first ensure that Party 1 wins more districts and then ensure that Party 2 wins more districts.
2. Students will learn more about gerrymandering and why it happens by watching this video. With a partner, students will look at the ratio of districts in North Carolina from 2003-2016 won by the Republican and Democratic parties over time and create a BOTG to display this data (image embedded in attached PPT). Students will then create loop diagrams to propose the cause of the trend from 2003-2011 (Balancing Loop) versus the emerging trend from 2013 on (Reinforcing Loop). Discuss causes of these different loops as a class.
3. Students will watch this video and read this article which both expand on gerrymandering. With their





partner, students will create an Iceberg diagram to illustrate the patterns, structures and mindsets that encourage gerrymandering to occur (based on the arguments in the video linked). Create a class Iceberg diagram and have one representative from each pair of students record ideas on the Iceberg. Discuss as a class. What would need to change in order to prevent gerrymandering? Read this article as a class and discuss the role of the Supreme Court in addressing this issue.

- Students will investigate mathematical approaches to measure the degree to which a district is gerrymandered (for example, calculating distance from a population center and the district borders, wasted votes or ratios based on income, race or other demographic factors). This lesson is based on this resource. Students will choose two metrics for calculating this and apply them to two different districts to determine the extent to which the districts (or even states for students who need an extra challenge) are gerrymandered.
- Students will display their data findings in visual data displays and produce a report or presentation to explain how their metric works, how they went about testing their metrics, which districts they found to be most gerrymandered and finally, an evaluation of their work and how they would change the metric/process if they undertook this task again.

Reflection

Plusses:

These tools were fantastic in helping student think deeply about how and why gerrymandering occurs. The iceberg was particularly useful as many students were surprised at the way in which systems are set up to facilitate the process of gerrymandering.

Challenges:

I assumed that high school students would pick these tools up quickly, when in fact, I had to stop and do several examples with each of my classes before they were able to catch on and work with these tools independently. If I teach this mini-unit again, I would have integrated several examples into the class resources to help students practice with a variety of cases in advance.

Suggestions for other practitioners and educators:

I am planning on keeping the Iceberg models my students created up in my classroom for reference and also creating a few anchor charts in the room for future use. I think the more students are exposed to these tools, the easier and more naturally they will be to use.

Evidence and Resources:



