Gerrymandering Introduction

After completing this lesson, students should be able to:

• Explain how gerrymandering is achieved through packing and cracking.
• Quantify the amount of packing and cracking in small “toy” examples.
Before Class:


- Answer the questions:
     (a) California
     (b) Illinois
     (c) Maryland
     (d) Michigan
     (e) New York
     (f) North Carolina
  2. Two common techniques of gerrymandering are called and .
  3. The NYTimes article ”What is Gerrymandering?” from 6/27/2019 suggests that currently, most gerrymandering favors Republicans rather than Democrats. What is the most likely reason for this?
     (a) Republicans favor strong local government.
(b) Republicans did well in the elections in 2010.
(c) Gerrymandering is part of Republican party philosophy.
(d) Republicans are less ethical than Democrats.

4. According to the 6/27/2019 NY Times article on “What is Gerrymandering?”, the Supreme Court decided that it cannot rule on cases of partisan gerrymandering, in part for the following reason:
(a) Gerrymandering does not harm anyone.
(b) There is nothing in the Constitution that rules out gerrymandering.
(c) There is no clear, precise, and manageable standard for what constitutes fair districts vs. gerrymandered ones.
Background and context

NY Times June 27, 2019 “What is Gerrymandering?” says:

The majority opinion, written by Chief Justice John G. Roberts Jr. and joined by four other conservative justices, said that in order for judges to evaluate claims of partisan gerrymandering, they would need “a limited and precise standard” that would be “clear, manageable, and politically neutral.” But no one had proposed one, the court said.

**Question.** How can we tell if gerrymandering has occurred? Is there a “precise” standard that we can obtain using quantitative methods?
Question. Which political offices do we elect using districts in North Carolina?

Question. When do you expect districts to next be drawn? (PollEv) Why?

Question. Who does the redrawing of districts? What are the potential problems of this system?

Question. What is the difference between gerrymandering and redistricting?
Where does the term “gerrymandering” come from?

Boston Gazette March 1812
Gerrymander a 6 x 6 grid

Try your hand at gerrymandering. Take a picture of each of your gerrymandered “maps”.

1. Draw a $6 \times 6$ grid of circles and color 19 of them red and 17 of them blue at random. These circles represent voters from two political parties, e.g. Republican and Democrat.

2. Draw districts of 3 voters per district so that there are an equal number of red districts and blue districts. Note that a district’s color depends on the majority of voters in that district.

3. Now, draw districts to get as many red districts as possible. How many could you achieve? What is your percent of red districts vs. your percent or red voters?

4. Next, draw districts so that as many blue districts as possible. How many could you achieve? What is your percent of blue districts vs. your percent or blue voters?

5. What methods did you use to gerrymander?

**Question.** What do you think is the maximum number of red districts (or size 3 voters) that can be achieved in a $6 \times 6$ grid with 19 red voters and 17 blue voters? (PollEv) What about blue?
Two main techniques of gerrymandering are called “packing” and “cracking”. What do these terms mean?
Homework

1. Consider the figure below. Assume that you must divide the state into 7 districts.

(a) What is the greatest number of districts that Republicans can win?
(b) What is the least number of districts they can win?
(c) What do you think the most fair outcome would be?

Justify each of your answers. Note: for a full justification of parts (a) and (b), you need to 1) draw a plan that achieves the number, and 2) explain why you can’t do any better.

2. Suppose you have a district with 101 voters, and each can vote either Republican or Democrat.

(a) How could the vote be split between Republican and Democrat in the district
of 101 voters in order for each party to waste the exact same number of votes in this district? What if the district contained 1,000,001 voters?

(b) What is the maximum number of votes that Republicans could waste in the district containing 101 voters, if they lose the district? How should the vote be distributed to achieve this? Why can’t they waste any more than this?

(c) What is the maximum number of votes Republicans could waste in the district containing 101 voters if they win the district? How should the vote be distributed to achieve this? Why can’t they win any more than this?

(d) What is the maximum possible DIFFERENCE in wasted votes between Democrats and Republicans in the district containing 101 voters, and how could the vote be distributed to achieve this? Why can’t you have a bigger difference?