Apportionment

Topic(s):
Apportionment, voting, government, representative

Grade Level:
7-8

Approx. Time Required:
35 minutes

Learning Objectives:
Students will be able to:

- Analyze and interpret data in a graph, table, or other visual form.
- Write responses that demonstrate understanding of a given set of data.
- Use data from a table or graph to determine the rate of change.
- Understand the difference between a popular vote and an electoral vote.
- Make predictions based on historical data.
- Understand the importance of being counted in the decennial census.

Worksheet Description

Students will learn the significance of the U.S. Constitution and Constitution Day, with a focus on how the census is called for in the Constitution and why it is conducted every 10 years.

Materials Required

- "*What is Apportionment*" video *(https://www.census.gov/programs-surveys/sis/resources/ videos/2020census-apportionment.html)*
- "*How is Population Shifting in Your State*" graphic to display on the board *(https://www.census.gov/ library/visualizations/interactive/population-shifting-in-cities-or-towns-2023.html)*
- A projector or interactive whiteboard with internet
- Printed student worksheets
- Small pieces of paper for each student's ballot

About the Census Bureau and the Decennial Census

In addition to the information that is built into instructions for this activity, the following points provide an easy, grade-appropriate way to explain the census to your students.

- The decennial census is a count of every person living in the United States that occurs every 10 years.

United States® Census Bureau

STATISTICS IN SCHOOLS
Classrooms Powered by Census Data

- It is important that every person be counted so that the government can properly distribute $675 billion to communities.

- The population of every state, as counted in the census, also determines how many representatives each state is given in the U.S. House of Representatives.

- You can do your part by making sure an adult in your home counts you—and every person living in your home—in the 2020 Census.

Before the Activity—10 Minutes

1. Begin by surveying students on a controversial, but relatable, question: "Should schools be year-round, with quarterly two-week breaks instead of one long summer break?" Ask students to consider the two options: Option A: Year-round school with more breaks or Option B: One long summer break.

2. Have students write their vote (Option A or B) on a small piece of paper, or "ballot," and then submit their ballots. Collect the ballots. Then count and tally the total votes on the board. Identify which option won this popular vote.

3. Next, divide students into three unequal groups. Allot one representative for every two students (for example, a group of six would have three representatives). Repeat the vote on the same question, providing one minute for each group to discuss. Then have the representatives from each group go to the front of the room and tell the teacher their vote. Tally up the "electoral vote" on the board next to the popular vote.

   Explain the difference between a popular vote—where every person's vote is counted—and an electoral vote—where representatives vote on behalf of people they represent. Ask students whether they felt their views were fully represented by their representative.

4. Discuss how membership is determined in the U.S. Congress. Provide context for students about the federal government, such as:

   - The U.S. Congress comprises two legislative bodies, the Senate and the House of Representatives.

   - The process for determining the number of representatives each state receives in the U.S. House of Representatives is called apportionment and is based on the population recorded in the decennial census, as required by the Constitution.

   - The decennial census counts where each person is living in the United States as of April 1, and the census data will be used to reapportion each state's seats in the U.S. House of Representatives.

- During a presidential election, each state has as many electoral representatives as it has representatives and senators in Congress. For example, if Alabama has seven representatives and two senators, it will have nine electoral representatives.

5. Review key vocabulary with the class:

- **U.S. Congress:** The legislative branch of the U.S. government. The U.S. House of Representatives and the Senate work together to create laws.

- **Apportionment:** The process of dividing the 435 seats in the U.S. House of Representatives among the 50 states according to each state's population. The population is determined by the decennial census. At the conclusion of each census, the results are used to calculate the number of House seats to which each state is entitled.

- **U.S. House of Representatives:** One of the two legislative bodies of the U.S. Congress established in Article I of the U.S. Constitution, with its members elected every two years and states allotted one or more seats based on their populations. (The other legislative body is the Senate, in which each state is allotted two seats, regardless of the state's population.)

- **Popular vote:** A vote in which every person's vote is counted.

- **Electoral vote:** A vote in which people are elected to vote on behalf of a specific group of people.

During the Activity—20 Minutes

1. Show students "*What is Apportionment*" animated video. *(https://www.census.gov/programs-surveys/sis/resources/videos/2020census-apportionment.html)*

2. Hand out student worksheets, directing students to look at their state's population and number of representatives. Ask students to pick three other states—in addition to their own state—that they'd like to compare in the activity. Encourage students to choose a diverse group of states: for example, states from different parts of the country or some smaller and larger states.

3. Ask students to use the map and the table in **Activity Item: Congressional Apportionment** to complete Questions #1 through #3 on their worksheets. Students will record the number of representatives apportioned for their chosen states for the years 1950, 1970, 1990, 2010, and 2020, then calculate the rate of change between 1950 and 2020.

   Question #1: How many representatives are apportioned for your state, based on 2020 data?

   Answers will vary by state; example: Tennessee has 9 representatives.

Question #2: Choose three other states. Record how many representatives each state was allotted in 2020.

Answers will vary, depending on the states chosen. Example: Ohio has 15, Rhode Island has 2, and Texas has 38.

Write the following formula on the board for students to use in calculating the rate of change: (New # of reps - Old # of reps) / Old # of reps x 100. Give students 15 minutes to complete the data table in their worksheet (Question #3) and Questions #4 through #6.

Sample calculation for Washington:

$$\frac{(10\text{-}7)}{7} \times 100 = 43\%$$

Question #4: Which state gained the most representatives between 1950 and 2020, based on the rates of change you calculated?

Answers will vary, depending on the states chosen. Example: Texas had the greatest rate of change compared with Ohio and Rhode Island.

Question #5: Do you think the number of representatives in your state will increase, decrease, or stay the same after the 2030 Census? Do you think the rate of change in your state will be positive, zero, or negative? Why?

Answers will vary, based on your state's rate of change, but students should identify a trend, say whether they think it will continue or not, and provide reasoning to back their conclusion.

Question #6: Why is it important that the U.S. Census Bureau get an accurate count in the decennial census?

Answers will vary but may include that the population count for every state in the decennial census will determine how many representatives each state is given in the House of Representatives.

After the Activity—5 Minutes

Project the "*How is Population Shifting in Your State*" (*https://www.census.gov/library/visualizations/ interactive/population-shifting-in-cities-or-towns-2023.html*) graphic on the interactive whiteboard or overhead, and hover over a state to see the percent change in population for the 15 largest cities or towns.

census.gov/schools

Ask students what trends they notice and lead a discussion about the shift in population to or from your state and any population shifts for the country as a whole. Finally, have students record their answers to Question #7 in their student worksheets based on the classroom discussion.

Question #7: Based on the "How is Population Shifting in Your State" graphic, what trends in population do you notice within your state and across the country? Why do you think these shifts have happened?

Answers will vary, but students should notice that South Carolina and Texas have had the greatest increases in population over a 1-year period, while New York, Louisiana, West Virginia, California, Oregon, Hawaii, Pennsylvania, and Illinois are the only states to decrease in population. Students may say that job opportunities, job losses, cost of living, natural disasters, or education may have affected those shifts in population. Students should also notice population growth in the Southeast and in northern and western states and a decrease in population in the Northeast states.

Activity Item: Congressional Apportionment

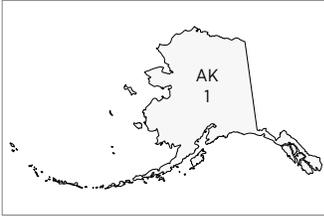| State	Apportionment Population	Number of Representatives							
		2020	2010	2000	1990	1980	1970	1960	1950
Alabama	5,030,053	7	7	7	7	7	7	8	9
Alaska	736,081	1	1	1	1	1	1	1	1
Arizona	7,158,923	9	9	8	6	5	4	3	2
Arkansas	3,013,756	4	4	4	4	4	4	4	6
California	39,576,757	52	53	53	52	45	43	38	30
Colorado	5,782,171	8	7	7	6	6	5	4	4
Connecticut	3,608,298	5	5	5	6	6	6	6	6
Delaware	990,837	1	1	1	1	1	1	1	1
Florida	21,570,527	28	27	25	23	19	15	12	8
Georgia	10,725,274	14	14	13	11	10	10	10	10
Hawaii	1,460,137	2	2	2	2	2	2	2	1
Idaho	1,841,377	2	2	2	2	2	2	2	2
Illinois	12,822,739	17	18	19	20	22	24	24	25
Indiana	6,790,280	9	9	9	10	10	11	11	11
Iowa	3,192,406	4	4	5	5	6	6	7	8
Kansas	2,940,865	4	4	4	4	5	5	5	6
Kentucky	4,509,342	6	6	6	6	7	7	7	8
Louisiana	4,661,468	6	6	7	7	8	8	8	8
Maine	1,363,582	2	2	2	2	2	2	2	3

Activity Item: Congressional Apportionment (Cont.)

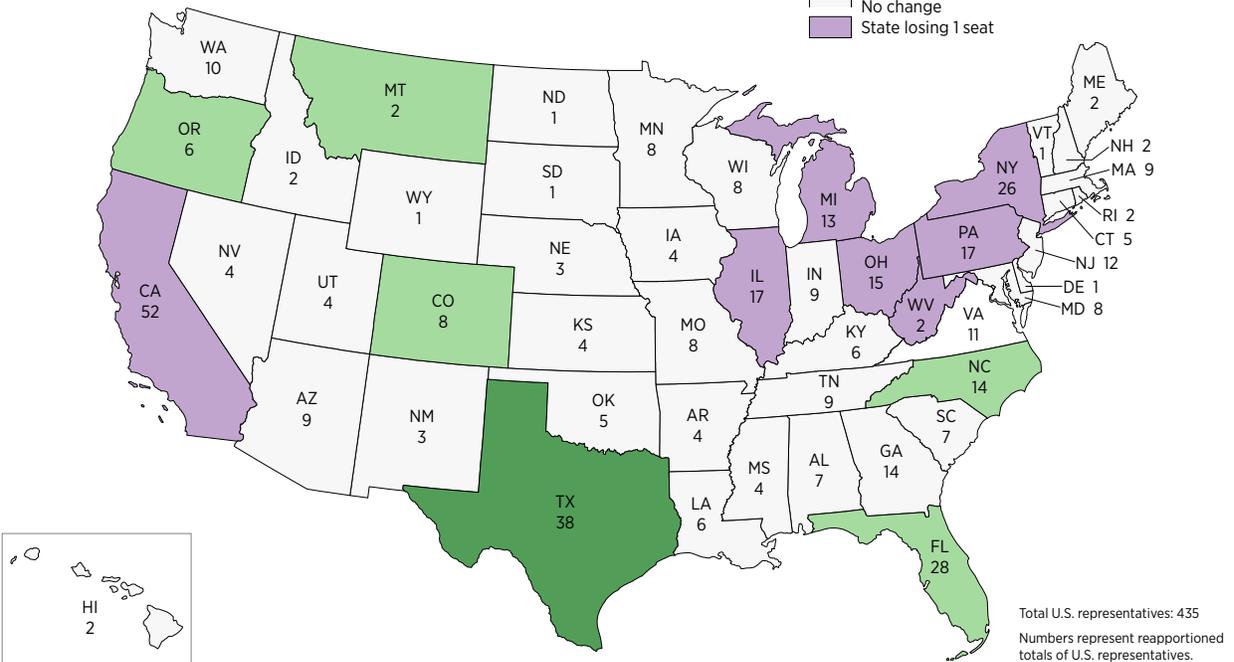| State	Apportionment Population	Number of Representatives							
		2020	2010	2000	1990	1980	1970	1960	1950
Maryland	6,185,278	8	8	8	8	8	8	8	7
Massachusetts	7,033,469	9	9	10	10	11	12	12	14
Michigan	10,084,442	13	14	15	16	18	19	19	18
Minnesota	5,709,752	8	8	8	8	8	8	8	9
Mississippi	2,963,914	4	4	4	5	5	5	5	6
Missouri	6,160,281	8	8	9	9	9	10	10	11
Montana	1,085,407	2	1	1	1	2	2	2	2
Nebraska	1,963,333	3	3	3	3	3	3	3	4
Nevada	3,108,462	4	4	3	2	2	1	1	1
New Hampshire	1,379,089	2	2	2	2	2	2	2	2
New Jersey	9,294,493	12	12	13	13	14	15	15	14
New Mexico	2,120,220	3	3	3	3	3	2	2	2
New York	20,215,751	26	27	29	31	34	39	41	43
North Carolina	10,453,948	14	13	13	12	11	11	11	12
North Dakota	779,702	1	1	1	1	1	1	2	2
Ohio	11,808,848	15	16	18	19	21	23	24	23
Oklahoma	3,963,516	5	5	5	6	6	6	6	6
Oregon	4,241,500	6	5	5	5	5	4	4	4
Pennsylvania	13,011,844	17	18	19	21	23	25	27	30
Rhode Island	1,098,163	2	2	2	2	2	2	2	2
South Carolina	5,124,712	7	7	6	6	6	6	6	6
South Dakota	887,770	1	1	1	1	1	2	2	2
Tennessee	6,916,897	9	9	9	9	9	8	9	9
Texas	29,183,290	38	36	32	30	27	24	23	22
Utah	3,275,252	4	4	3	3	3	2	2	2
Vermont	643,503	1	1	1	1	1	1	1	1
Virginia	8,654,542	11	11	11	11	10	10	10	10
Washington	7,715,946	10	10	9	9	8	7	7	7
West Virginia	1,795,045	2	3	3	3	4	4	5	6
Wisconsin	5,897,473	8	8	8	9	9	9	10	10
Wyoming	577,719	1	1	1	1	1	1	1	1

Source: https://www2.census.gov/programs-surveys/decennial/2020/data/apportionment/apportionment-2020-map01.pdf

Activity Item: Congressional Apportionment (Cont.)

Apportionment of the U.S. House of Representatives Based on the 2020 Census

AK 1

Change from 2010 to 2020
- State gaining 2 seats
- State gaining 1 seat
- No change
- State losing 1 seat

WA 10
MT 2
OR 6
ID 2
WY 1
ND 1
SD 1
MN 8
WI 8
MI 13
ME 2
VT 1
NH 2
NY 26
MA 9
RI 2
CT 5
NV 4
UT 4
CO 8
NE 3
IA 4
IL 17
IN 9
OH 15
PA 17
NJ 12
DE 1
MD 8
CA 52
AZ 9
NM 3
KS 4
MO 8
KY 6
WV 2
VA 11
OK 5
AR 4
TN 9
NC 14
SC 7
TX 38
LA 6
MS 4
AL 7
GA 14
FL 28

HI 2

Total U.S. representatives: 435

Numbers represent reapportioned totals of U.S. representatives.

United States® Census Bureau | U.S. Department of Commerce / U.S. CENSUS BUREAU / census.gov

United States® Census 2020

Source: https://www2.census.gov/programs-surveys/decennial/2020/data/apportionment/apportionment-2020-table01.pdf