

Mid Term Elections 2018

Elections require long and costly preparation. Because of this, extensive planning is required to designate where to geographically campaign based on variables of voter interest. Results from previous elections can be used to analyze geographical areas for intense campaigning. Elections are held for national, state and local areas.

Build skills in these areas:

- ▶ Use predominant mapping.
- ▶ Filter and use map notes.
- ▶ Create a tabbed story map.

What you need:

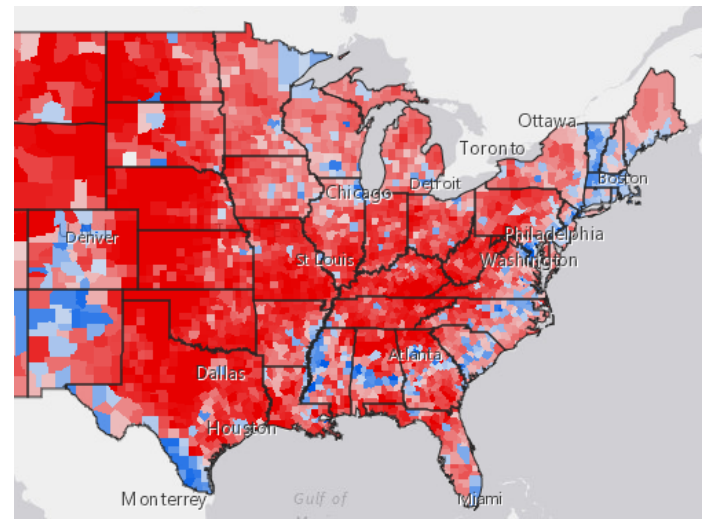
- ▶ Account required with assigned published role.
- ▶ Estimated time: over 1 hour

Scenario

Your GIS team has been selected to use historical data to analyze voting patterns and predict where the political parties need to concentrate their money and time to the best advantage for the 2018 elections.

You have been contracted by both the Democrats and the Republicans, so you must analyze the data objectively.

You need to present a series of analytical political maps that show both historical trends and predictions of future campaigns. Each map must be accompanied by an explanation, and other media is allowed. The maps must be presented in a story map format.



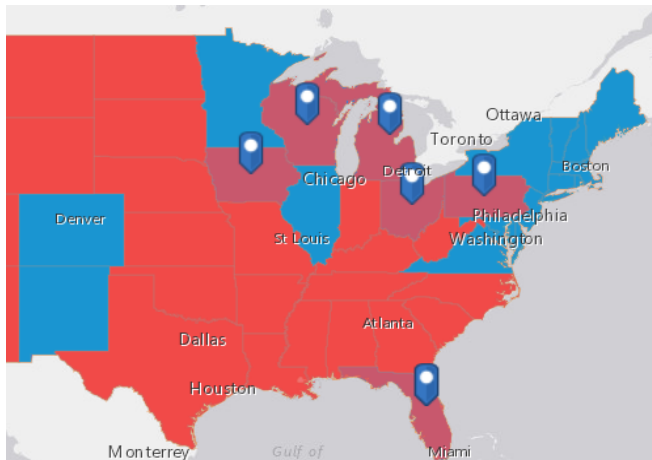
USA Level Map 01

The purpose of this map is to show which states changed voting affiliation between 2012 and 2016.

1. Open Mid-Term Election 2018 and save into your organization. Save as **01 Election 2016 Swng States_your initials**. Add appropriate metadata. Remove the existing tags and add individualized tags.
2. Click the Change Style icon under **USA States 2012 Election**. Choose the attribute **F2012_elec**.
3. Click OPTIONS and right click on the red square beside Obama and change to blue. Click the blue square beside Romney and change to red. Click OK and DONE.
4. Next click the States **2016 Election** and change the style using the attribute **Win2016S**. Click DONE.

The color of the states that changed from blue to red can be seen on the map. To make the states that changed more visible add to map notes.

5. In the upper right search tab search for each name of the six states that have changed and add a map note.
6. Save.

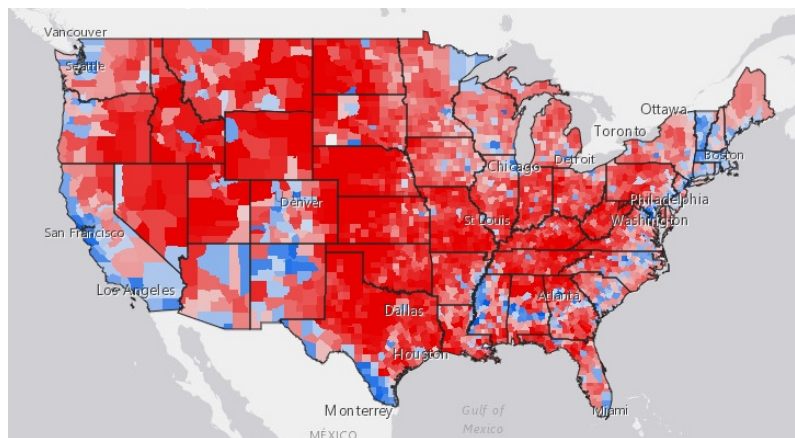


Q1 *Do some quick research and explain the reason that was given for these changes. Write the explanation in the description of your map so it will be easily accessible.*

USA Level Map 02

In this section the spatial variation of voting in the 2016 election using county level data is shown. Use predominant mapping to display the data. Predominant mapping compares attributes that share a common subject and unit of measurement to see which has the highest value. Color shows the predominant category, and transparency shows the strength of the attribute.

1. Open **Mid-Term Election 2018** and save into your organization as **02 USA Counties Election 2016_yourinitials**. Add appropriate metadata. Remove the existing tags and add individualized tags.
2. Turn on Counties 2016 Election.
3. Click the style icon under Counties 2016 Election.
3. Choose an attribute: % GOP.
4. Add attribute and choose % DEM.
5. Choose Predominant Category>>SELECT.
6. Click OPTIONS.
7. Click the square color box by %GOP and change to red.
8. Click the square color box by %DEM and change to blue.
9. Click OK and DONE.
10. Click on **USA States (Generalized)** and move the layer about **Counties 2016 Election**.
12. Click the change style icon under **USA States Generalized** and choose OPTIONS.
13. Click Symbols and change FILL to be no color and OUTLINE to be black.
14. SAVE.



Q2 Write an analysis of the voting trends of the USA. Within this analysis name some states that would be beneficial for a Republican to campaign, a Democrat.

State Level Map 03

In the following section analysis will be done at a state level. The state of Virginia is to be used as an example. After completing the example state other states can be selected to analyze.

1. Save the **02 USA Counties Election 2016_yourinitials** as **03 Virginia_your initials**. Add appropriate metadata. Remove tags and add individualized tags.
2. Click the filter icon under **Counties 2016 Election** and create the expression

State is Virginia
3. APPLY FILTER.
4. Zoom to the state of Virginia.
5. Save.

Q3 Write an analysis of the voting trends in Virginia by counties. Within this analysis name some counties that would be beneficial for a Republican to campaign, a Democrat.

State Level Map 04

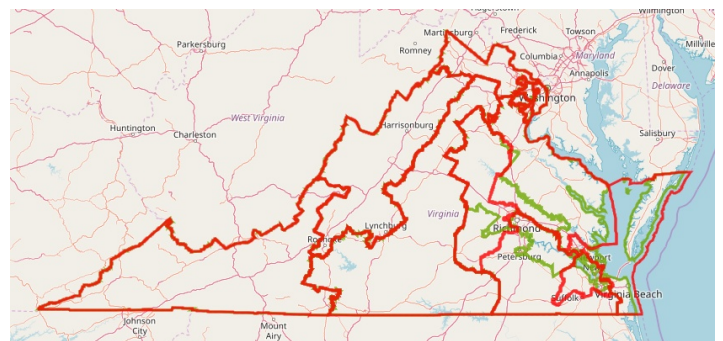
A congressional district is a geographic designation that elects a single member of a congress. There are 435 congressional districts in the United States House of Representatives. Districts are often drawn and redrawn by state governments. When districting becomes politicized, gerrymandering enters the picture. Gerrymandering is defined as the manipulation of boundaries so as to favor one party or class. It is the way that one political group tries to change a voting district to create a result that helps them or hurts the group who is against them. Two layers have been provided to show how congressional districts have changed. **USA 114 Congressional Districts** and **USA 115 Congressional Districts**.

1. Save 03 **Virgina_yourinitials** as 04 **Virginia Districts_yourinitials**. Add appropriate metadata. Remove tags and add individualized tags.
2. Under **USA 114th Congressional Districts** filter for:

State is VA.
3. APPLY FILTER.
4. Under **USA 115 Congressstional Districts** filter for:

STATEFP is 51.
5. APPLY FILTER.

Using various techniques of styling and filtering, identify the five districts that have changed.
6. Save.



Q4 List the Congressional Districts that have changed.

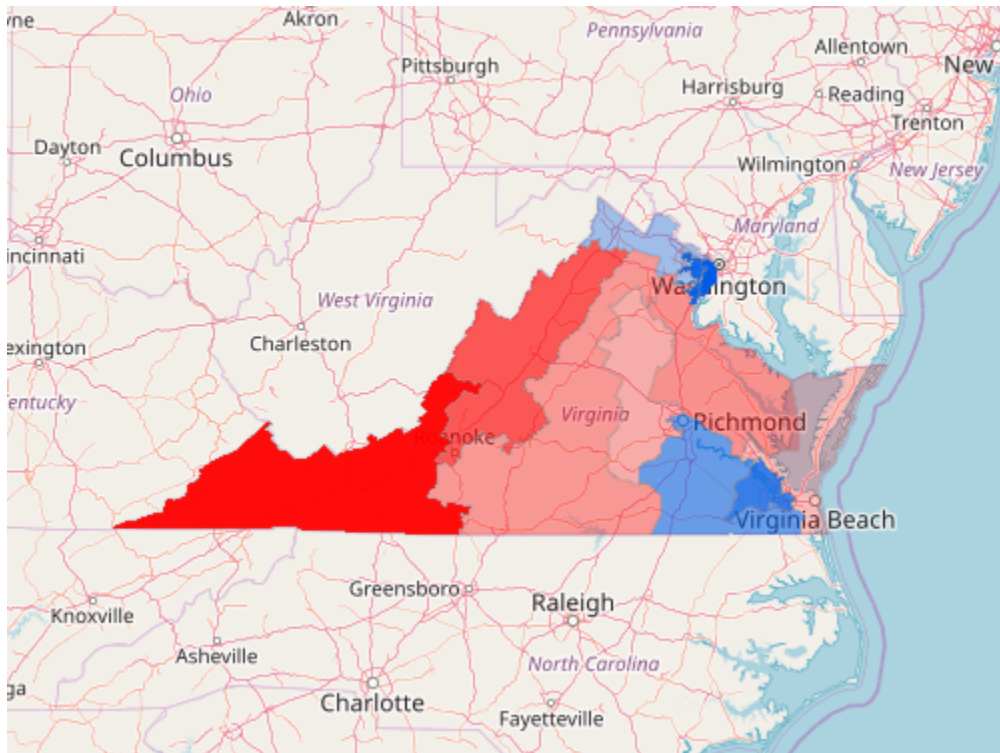
State Level Map 05

Use predominant mapping to show how Congressional Districts voted in the past. .

1. Save **04 Virginia Districts_yourinitials** as **05 VA Districts Voting_your initials**. Add appropriate metadata. Remove tags and add individualized tags.
2. Click change style under **USA 115th Congressional Districts**. Choose the attribute: Clinton 2016.
4. Add attribute and choose Trump 2016.
5. Choose Predominant Category>>SELECT.
6. Click OPTIONS.
7. Click the square color box by Trump 2016 and change to red.
8. Click the square color box Clinton 2016 and change to blue.
9. Click OK and DONE.
10. Save.

Q5 Write an analysis of the voting trends in Virginia by congressional districts.

Q6 What districts would you have the most succes campaigning to switch to Democrat? to Republican?



Locat Precincts and Voting Polls Map 06

A precinct is generally the lowest-level governmentally related division in the United States, and in that context is also known in some places as an election district. The US Census uses the term voting district. A polling place is where voters cast their ballots in elections. Placement of polling stations can have an influence on voter turnout. The geographic location of precincts and voting places have been recognized as major factors in voter turnout.

The following exercise deals with polling precincts and voting places in Fairfax County, VA. This exercise can be duplicated to your individual state precincts and polling places.

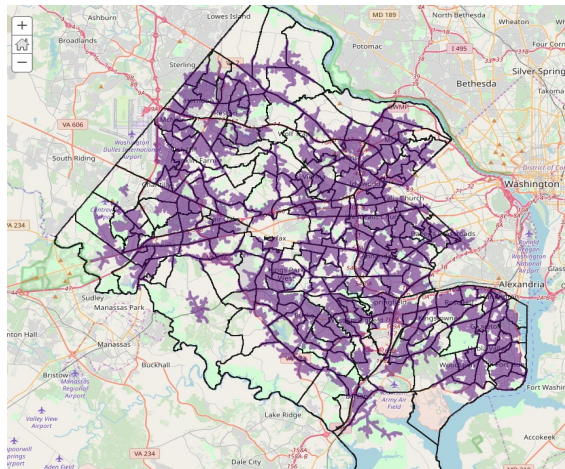
1. Open **Mid Term Election 2018 Fairfax** and save into your organization. Save as **06 Fairfax Precincts and Polling Places__your initials**. Add appropriate metadata. Remove the existing tags and add individualized tags.

It would be interesting to find out how many of the polling places were within a 3 minute drive-time radius of the polling place.

2. Under **Polling Places** click the icon Perform Analysis.
3. Choose Use Proximity>>Create Drive-Time Areas.
4. The point layer is **Polling Places** and the Driving time is 3 Minutes.
5. Uncheck Use current map extent.
6. RUN ANALYSIS.
7. Done.
8. Click the Change Style icon under **Voting Precincts**.
9. Click OPTIONS>>Symbols.
10. Select No Color for Fill and make the Outline Black 2 pt.
11. Change the Basemap to OpenStreetMap.

Change the Basemap to OpenStreetMap.
identify any geographic areas of Fairfax County that need

Q7 *Identify any geographic areas of Fairfax County that need more polling places.*



Political Story 07 Web Map Application

Esri Story Maps let users combine maps with text, images, and multimedia content. This following section creates a story map from the six maps that have been made to investigate national, state, and local politics.

1. Go to Content and click **01 Election 2016 Swng States_your initials** and open the map.
2. On the top ribbon click Share>>CREATE A WEB APP.
3. Click Build A Story Map>>Story Map Series.
4. Click CREATE WEB APP.
5. Title: 2018 Mid Term Election Analysis.
6. Remove the tags and add individualized tags.
7. DONE.
8. Select Tabbed and START.
9. Click the blue arrow to advance.
10. Tab title should be: Swing States in the 2016 Election.
11. Select the 01 Election Swing States Map.
12. ADD.
13. Add descriptive text on the left side panel. Also add any appropriate media.
14. Click Add to continue the map series. Continue adding maps and explanatory text until all seven maps have been added to the story map.
15. SAVE.
16. Launch.

In this exercise political data at a national, state, and local level has been analyzed. The results have been displayed as a Story Map.