Where are the Voters?: Crafting a Winning Political Campaign Strategy

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Introduction/Rationale

William Penn High School, the school at which I teach, is the largest high school in the state of Delaware and is comprised of a very diverse student population that comes to us from a range of backgrounds. Since ours is the only high school in the Colonial School District, our 2200 students come from a range of areas in the eastern portion of the county. Our students that live in the southernmost portion of our district's boundaries live in area that is generally more rural and affluent, while those that live in the northern section of the district mostly come from poorer neighborhoods that are in the city of Wilmington or just along the outskirts, and those in the middle part of the district live in a very working-class suburban area. During the 2018-2019 school year, seventy-six percent of students identified as part of a racial/ethnic minority, with nearly forty percent of our students coming from families that have been identified as earning low incomes. This means that all students in the school receive free breakfast, lunch, and meals if they stay after school for sports or extra-curricular activities. In addition, nearly one-fifth of our students receive special education services and nine percent are identified as English Language Learners.[1]

In recent years, William Penn has gained recognition on both a state and national level for revamping the high school experience our students receive and increasing the level of college and career readiness they have upon graduation. At the start of their high school careers, students choose from one of over twenty degree programs, which are divided into three different colleges. Our business college offers career pathways such as Air Force Junior ROTC, Culinary Arts, and Financial Services. Students in the humanities college take classes towards Education, Legal Studies, or Visual and Performing Arts pathways. STEM college students participate in degree programs such as Agriculture, Engineering, and Health Services. The courses that students take in their chosen degree program are top-notch and have served as a model for other high schools throughout the state that want to implement a similar career pathway program.

The goal of these programs is to set students up for success whether they choose to attend college or enter the workforce following graduation. This can be seen in the fact that our Culinary students graduate with the foundational knowledge that will help them

[1] "Penn (William) High School," Delaware Report Card, accessed November 30, 2020, https://reportcard.doe.k12.de.us/detail.html#aboutpage?scope=school&district=34&school=490.

succeed if they choose to go to culinary school but also have catering experience, ServSafe certifications, and restaurant management exposure gained during internships, which makes them marketable for jobs in the restaurant industry right out of high school. The same holds true for our Health Services students that graduate as certified phlebotomists but have also learned the perseverance that will be necessary for medical-related classes in a post-secondary setting, and our Engineering students that participate in a certification program at the local community college for half a day throughout their junior and senior years.

The heartiness of these programs has created a school environment that looks towards the future and strives to demonstrate the connections between classroom content and students' actual lives, as well as the interconnectedness of various content areas. On any given day in William Penn High School, you are likely to see Culinary students preparing meals for sale in the Bistro from foods that our Agriculture students raised or grew at Penn Farm, Construction students assembling and finishing guitars that our music students will be using in next semester's guitar class, or Legal Studies and Forensics students working together to recreate accident scenes with dead deer. Our students are experiencing the fact that what they learn in high school does matter and will be used in their lives.

Since I began teaching at William Penn, one of my teaching assignments has been our ninth grade social studies course, comprised of Civics for one semester and Geography for one semester. This is traditionally the course assigned to the newest teachers in the department, who are then given opportunities to "move up" to a different grade-level as they become effective teachers and get worn down from the demands of teaching freshmen. As a result, when I joined the ninth grade social studies team, I found myself teaching a course that was lacking in cohesion and activities that would engage students in the content. Additionally, this full-year Civics/Geography course had been previously taught as two semester-based courses where students would change teachers and classes at the conclusion of the second marking period. When it was shifted into one full-year course, the two subjects continued to be taught in isolation from one another. As I have learned more about the content I am teaching and have had an opportunity to shape the way I teach my classes, I have overhauled much of the curriculum, adding concepts and activities that are in closer alignment with Delaware's Social Studies Standards, and those that are likely to pique students' interests.

Despite the significant amount of work I have done on this ninth grade course, the one area where I feel it is still lacking is connection between the Civics half of the course and the geography half, despite the opportunities the course's content presents for doing so. Our case study on structures of government around the world lends itself to adding a spatial component and much can be learned about political ideologies and parties by analyzing trends on maps, but map reading skills are not introduced to our students until the study of Civics has been completed. While teaching geography, we have

opportunities to extend content taught in Civics by using mapped patterns to fix problems in communities or discussing how governmental decisions play a role in the regions and boundaries students are learning about, but these opportunities often fall to the wayside. My goal moving forward is to continue to look for ways to integrate the Civics and Geography halves of the course, which will help students see the applications of each discipline.

This unit will serve as the first step towards building these cross-curricular connections for my students by looking at how geography can be used to win an election. It enhances our current unit on political parties and was designed as I was teaching Civics in the context of the 2020 Presidential election, but will lend itself to being modified for use in other school years. As geography is one of the social studies disciplines that my students enter high school with limited prior knowledge, I hope that this unit will provide other teachers possibilities for finding unique ways to incorporate geographic concepts into existing lessons and topics.

Content Objectives

Data and Geography

It is a widespread misconception that providing students with a geographic education means simply ensuring they leave our classrooms with the ability to label the continents and oceans on a map, identify land features, or name the capitals of all fifty states. At one time, this may have been true of geography courses taught in grade school, but technology has transformed the way we look at the discipline. Contemporary geography should focus on not just where things are located, but why they are located at specific points on the Earth's surface, as well as the complex interactions between humans and the environment in which they live. We now have the ability to plot any location-based data on a map, allowing geography educators to teach students how to identify spatial patterns and analyze data in powerful ways, making the geographic inquiry process vital to any Social Studies course. This is most effectively done through the use of geospatial technologies.

Although the general public may not use the phrase 'geospatial technology' on a regular basis, we are likely regular users of the technology. Geospatial technologies are integral parts of our lives without us even realizing it, as our cell phones are constantly collecting place-based information from us, while using location services to add geotags to our Snapchats, show which stores closest to us carry a specific item, or alert us if we've come in contact with someone that has COVID-19. Geospatial technologies are also being harnessed when we use our phone's global positioning system, allowing us to share our location with a family member or navigate to an unfamiliar location with Google Maps. Remote sensing is another facet of geospatial technology that is likely to be familiar, as it consists of satellite- or aircraft-taken images of the Earth's surface.

These images provide a snapshot of specific points at specific times, which make up the foundation of the base maps that show land cover, how an area has changed over time, or damage from a storm.[2]

Geographic information systems (GIS), however, are the geospatial technology that is likely to be least familiar to non-geographers. This geospatial analytical tool joins together layers of spatial data with that which shows characteristics, to create map layers that allow for viewing, storing, and analyzing geographic data. Characteristic data is added to an array of base maps in GIS software, and shows things such as land use, property ownership, buildings, vegetation, infrastructure, or information about the people that live across the globe. Viewing multiple layers of spatial data laid on top of each other allows for the study of spatial relationships and distribution that can be used to draw conclusions and propose solutions to place-based problems.[3] Today, GIS technology plays an important role in decision-making for almost any field of work. Walgreens maps the volume of flu-related products in order to determine the quantity of flu vaccines to send to stores in different regions. Starbucks uses data about income, types of business, and commutes to make decisions about where they should establish new stores. British Petroleum (BP) tracks data in ArcGIS software to assess the risks of running pipelines in various locations and ensure their infrastructure is being properly maintained.[4]

Various levels of government are another example of sectors that rely heavily on GIS data. The ability to analyze data with a spatial lens allows government agencies to gain valuable insight into the human and physical features that influence their area of jurisdiction. This includes developing plans for emergency management, understanding how law enforcement resources should be allocated based on crime patterns, understanding natural risks that are present in a given area, planning for future development, and understanding the health and human services needs of the community.[5] GIS technology is also relevant as government entities plan for elections. Geospatial data is beneficial for providing the public with information about the elected officials that represent them, gauging wait times and voter turnout on the day of an election, and reporting the results of an election with the red and blue maps that are so familiar to us.

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[2] J. Chris Carter, *Introduction to Human Geography Using ArcGIS Online* (Redlands, CA: Esri Press, 2019).
[3] Carter.
[4] "Esri Industries," YouTube, accessed November 30, 2020, https://www.youtube.com/channel/UCZTiOg3n0pqUDSatq7mS2PA.
[5] "Introduction to State and Local Government," ArcGIS Solutions, accessed November 30, 2020, https://doc.arcgis.com/en/arcgis-solutions/industries/introduction-to-state-and-local-government.htm.

Most importantly, though, it can be used to gather information about the people living in a district, which can then be used to plan how to win an election.[6]

Mapping Potential Voters

Demographic Information

Gathering and analyzing data about the people living within an electoral district is a crucial step for leveraging the power of geospatial data to win an election. Nearly every piece of demographic data that is available for someone provides clues to their political ideology and expected voter behavior. Following an election, we are often bombarded with statistics about how various demographic groups voted. We know that in 2016, the majority of white voters with four-year college degrees cast ballots for Hillary Clinton, while their peers that did not earn college degrees tended to favor Donald Trump. In the same election, age also provided valuable insight into voter behavior- with people under 30 the group least likely to turn out to vote but also tending to prefer Clinton, while those over the age of 50 were more likely to support Trump. Similar analyses could be run with data on voters' official party registration, religious practices, racial and ethnic backgrounds, location of their homes, and income levels.[7] It is interesting to evaluate this information after the fact, but the ability to analyze it prior to an election, while conducting a campaign, is invaluable when making decisions about how to inform and activate the voters that are most likely to support a particular candidate.

Although each demographic group does not behave in the exact same ways every single election cycle, analysis of general trends can provide us with a pretty good idea about how a person will vote based on the groups they belong to at the time that they cast their vote. Registered party affiliation and past voting trends are the demographic factors first evaluated when considering whether a candidate will be successful in a given electoral district, as there is a strong tendency for people that are reliable voters to have a strong turnout, while voting down party lines. Running for office in affiliation with a political party that many voters in a given district belong to is the most basic step towards harnessing geospatial data to win a campaign. However, there is much more place-based data that is valuable in understanding voter behavior. Analyzing age data shows that younger voters tend to have more progressive ideologies and have little concern with the impact of government regulation on their daily lives, and are likely to consume political information via social media, while their older counterparts are less likely to be

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[6] "Elections," ArcGIS Solutions, accessed November 30, 2020, https://doc.arcgis.com/en/arcgis-solutions/industries/elections.htm.

[7] "An Examination of the 2016 Electorate, Based on Validated Voters," Pew Research Center U.S. Politics & Policy, 2018, https://www.pewresearch.org/politics/2018/08/09/an-examination-of-the-2016-electorate-based-on-validated-voters/.

influenced by an Instagram story and more likely to support fiscally conservative candidates. An analysis of the genders and races of voters within a district provides insight on how political party impacts their decisions, with white males trending towards the Republican party, and women along with Black, Hispanic, and Asian voters historically giving their support to Democrats. Conservative candidates trend more favorably in districts that have high proportions of voters who attend weekly religious services. Veterans are extremely likely to support candidates that advocate for military spending, and perceive Conservatives as leaders that they will share values with them.[8] Simply having this data is useful in itself, but harnessing GIS to create a map layer that visually depicts the information can enable a political campaign to analyze the level of support they will have within a district, while highlighting which areas of the district they should focus their resources on. GIS analytical tools can also be used to pinpoint the locations of target voting groups, such as young, white Conservatives.

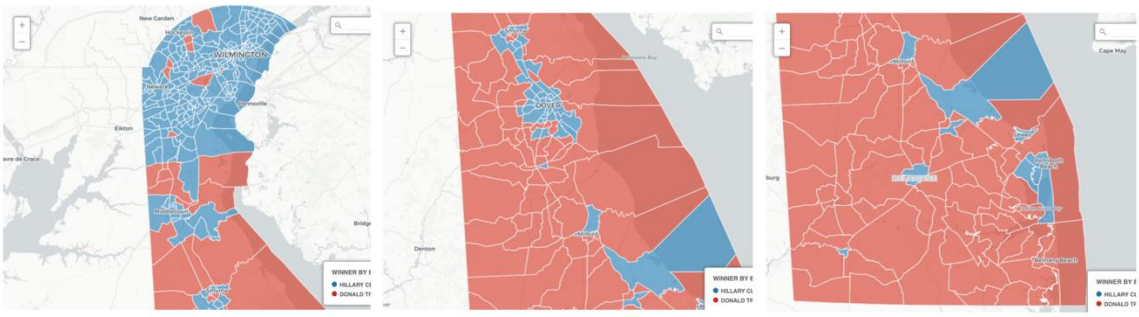
Voting Patterns Across Scale

Beyond allowing for conclusions to be drawn about expected behavior of individuals, an analysis of the demographic composition of voters has the ability to highlight patterns that are especially useful for conducting a successful political campaign. Valuable information can be extracted about population density and where there are clusters of like-minded voters, as well as barriers that may inhibit potential voters. Understanding regional differences of voters and their values is important, but in order to develop a true understanding of this data, it is crucial to consider the scale of analysis. Simply classifying each state as a red or blue state is a starting point that allows us to begin to see patterns of Democratic candidates winning in states on the West Coast and in the North East, while Republicans appear to dominate the Midwest. However, narrowing the focus down to a smaller area of analysis provides a greater level of detail about the distribution of voters that support each party. Delaware serves as a useful example, as the state level depicts ours as a solidly blue-leaning state.[9] However, evaluating county-level, or even census tract-level, data shows that Democrats only had the lead in New Castle County during the 2016 Presidential election, with 59% of Sussex County residents and 49.5% of Kent County residents casting votes for Donald Trump. In the same election cycle, the regional variation in voters' preferences were also evident in the results for state-level candidates. Democratic Gubernatorial candidate John Carney was most successful in New Castle County, while his Republican counterpart, Colin Bonini, won over voters in Sussex County. Democrats also won in the majority of State Senate and State House Districts in New Castle County, with many running in races that did not even have a Republican opponent, as Republicans garnered more support in State House and State

[8] Sheela Sequeira, "Using Key Voter Demographics to Win Your Election in 2018," CallHub, accessed October 18, 2020, https://callhub.io/key-voter-demographics-2018/.
[9] "2016 Presidential Election Results," Politico, 2016, https://www.politico.com/2016-election/results/map/president/.

Senate districts in Sussex county.[10] Examining data at a smaller scale shows how even county-level data marginalizes the presence of important voter clusters. A candidate that is going to truly harness the power of geography for activating Delaware voters must gather information about their behavior at the voting district level, each of which had between 1000 and 1500 residents cast votes in the 2016 election.

Figure 1: Delaware Election Results by Voting District, New Castle County[11]



At this scale, it is still evident that Democratic candidates are more successful in New Castle County, but data also highlights the Republican-leaning districts near Hockessin, north of Newark, and along route thirteen in New Castle. Data at the voting district-level tells the story of two very different parts of Delaware, separated by a physical boundary instead of the geometric boundary that distinguishes between counties. The Chesapeake and Delaware Canal creates a clear distinction between the liberal-learning northern area and the rest of the state. South of the canal, Delaware is surprisingly red, with districts that tend to vote for Democratic candidates clustered around the more populous areas of Smyrna, Dover and Rehoboth Beach.[12] Analysis of the variations in data across scales is a vital component of understanding the spatial differences in voting behavior across the state, and harnessing the power of geography to understand how voters are likely to respond to a candidate of a particular party.

In order to make even more sense of voter tendencies within election districts, and predict how specific groups will behave in the future, political campaigns also need to develop an understanding of the interregional migration patterns that exist within the

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[10] "Delaware Results," New York Times, 2017, https://www.nytimes.com/elections/2016/results/delaware.
[11] "Delaware Results."
[12] Karen Okamoto, "Delaware Presidential Race Results by Election District," *The News Journal*, November 9, 2016, https://www.delawareonline.com/story/news/politics/2016/11/09/delaware-presidential-race-results-election-district/93533064/.

state. Delaware has a highly transient population, but there are two particular migration routes that play an especially important role in the state's electoral map. The first is migration into the Middletown area. Throughout the town's history, it has been expanded from its original one square mile in size to the thirteen square miles it occupies today[13] and the population has grown exponentially. Middletown had a population that stayed relatively low from the 1970s until the year 2000, in which there were just over 6000 residents. However, over the past two decades the number of Middletown residents has nearly quadrupled to the current population of 24,000.[14] By 2030, Middletown is expected to have the largest population in New Castle County, which is evident in the amount of both residential and non-residential building permits that have been approved within the town in recent years.[15]

Figure 2: Eastern Portion of Middletown, Delaware in 2005[16]

[13] "Community Profile," Town of Middletown Delaware, accessed October 18, 2020, https://middletown.delaware.gov/community-profile.
[14] "Middletown, Delaware Population 2020," World Population Review, accessed November 30, 2020, https://worldpopulationreview.com/us-cities/middletown-de-population.
[15] Jared Whalen, "What Does Delaware's Urban Growth Look like from Above?," *The News Journal*, January 13, 2020, http://content-static.delawareonline.com/projects/01-2020-development/index.html.
[16] Whalen.

Figure 3: Eastern Portion of Middletown, Delaware in 2019[17]

Middletown's newer residents, many of whom were young professionals from the Wilmington area looking to move South for larger houses and better schools, have transformed the political landscape from the conservative-leaning rural area it once was, to a pocket of blue districts that stand out among the red that dominates below the canal.[18]

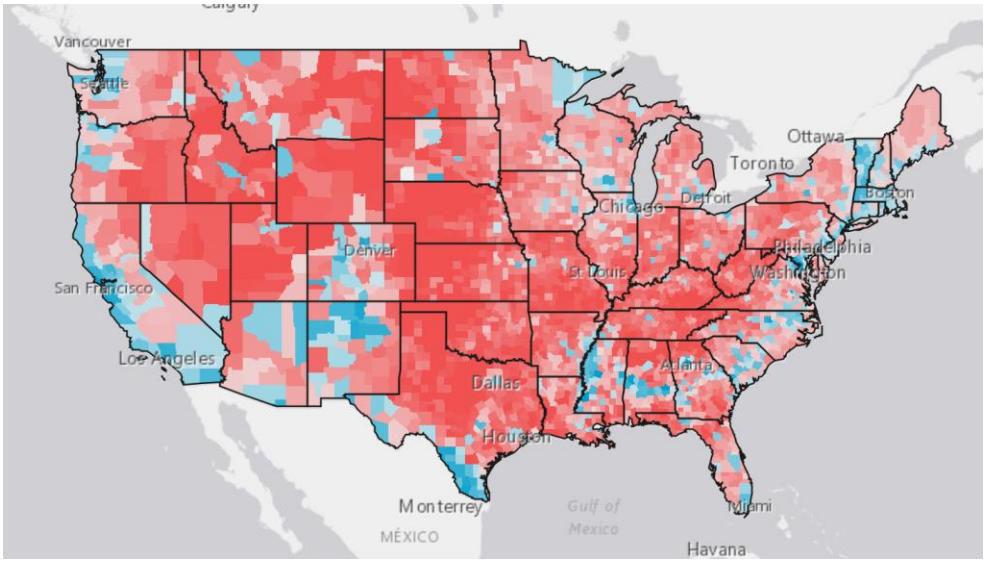
The state's beach towns have also seen a pattern of in-migration of Democratic voters with very different demographic backgrounds. Sussex county is currently experiencing the state's largest population growth, with a population that has increased by forty percent over the past two decades. Towns such as Bethany Beach, Millville, and Lewes are building more houses than ever before and turning to construction in untraditional residential tracts of land.[19] The newest residents of these towns are overwhelmingly retirees from the Washington, DC area, many of whom previously spent time vacationing in the area and have the financial means to afford property considered a bargain compared to the high property costs in the District of Columbia. In 2006, Rehoboth Beach's population had a median age of 57. By 2030, three-quarters of Rehoboth

[17] Whalen.
[18] Karl Baker, "90 Minutes to Work? Mega-Commutiny Takes Hold in Del.," *The News Journal*, March 11, 2016, https://www.delawareonline.com/story/news/2016/03/11/90-minutes-work-mega-commuting-takes-hold-delaware/80821770/.
[19] Okamoto, "Delaware Presidential Race Results by Election District."

residents are expected to be over the age of 65.[20] As voters migrate to Delaware beach towns from the Democratic-leaning suburbs of the nation's capital, they are bringing their voting patterns with them and creating another pocket of blue among the red of Sussex county's electoral map. Understanding the migration patterns of people within the state allows political campaigns to make predictions about how Delawareans will vote in the future.

ArcGIS Features and Campaign Decisions

Gaining information about where voters are is the first step in harnessing the power of geospatial technology to win an election. Once a campaign or political party has gathered information about where their likely voters are and their migration habits, they can begin to use analysis tools to make decisions about their plan of action. This could be as simple as color-coding election results that allow for easy visualization of voter behavior patterns.[21] It could also involve presenting voter data so it depicts the percentages of Republicans and Democrats in given areas, such as counties or election districts, in order to make predictions about the likelihood of a campaign or candidate being able to flip the location in their favor.[22]



[20] Sarah Mahoney, "Dream Towns," *AARP The Magazine*, August 2006, https://www.aarp.org/home-garden/housing/info-2006/dream_towns.html.
[21] Kathryn Keranen, "Midterm Elections 2018," Esri Teach with GIS, 2019, https://www.esri.com/content/dam/esrisites/en-us/media/pdf/teach-with-gis/mid-term-elections-2018.pdf.
[22] Keranen.

Figure 4: Percentage of Democrats and Republicans by County[23]

In doing this, it is helpful to evaluate this data for multiple election cycles, which is easily done through adding multiple data layers through ArcGIS.

The ability to upload data from a spreadsheet and geocode it can be useful when making decisions about campaign strategy. This feature allows for viewing the spatial distribution of voters and gathering information about their lifestyles, which can then also be plotted using geospatial tools. Once this data has been added to GIS software, changing the attribute displayed on the map allows political analysts to see patterns in data such as age, gender, and any other information the campaign is able to gather about individual voters. In Esri's Learn GIS lesson on geocoding voters, we are able to see that political analysts in Howard County, Maryland chose to spatially represent political party affiliation, campaign donations and volunteering history, in order to plan their campaign strategy.[24] This use of geospatial technology would be beneficial to someone trying to win a political campaign in Delaware, as it allows them to gather information about which voters to target for their various needs. If the campaign is in search of volunteers or contributions, they are likely to focus their efforts on geographic locations that have a higher proportion of the population that has engaged in these activities before. However, during campaign activities that focus on informing voters of their candidate's platform, staff will want to focus their efforts on geographic locations that do not have voters who have already shown their support.

The use of tapestry segmentation has the potential to build on geocoded and other data in a way that is hugely beneficial for developing an understanding of the people that live in a particular location. This feature classifies American neighborhoods into sixty seven different categories based on demographic and socioeconomic characteristics, at various scales down to the census tract-level. This data can be especially useful to those running political campaigns, as it gives them the ability to characterize pockets of potential voters in geographic areas that they are not familiar with. Each segmentation provides a generalization of the population within a given geographic location including age structure, racial and ethnic breakdown, information about income and net worth, statistics about what people spend money on, home ownership data, and spatial distribution of where neighborhoods with similar segmentation can be found.[25] When running a political campaign in Delaware, it is beneficial to understand the difference between the census tract areas with classifications that fall within the Cozy Country Living LifeMode

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[23] Keranen.

[24] Esri, "Mapping Voter Data to Plan Your Campaign," Learn ArcGIS, accessed November 30, 2020, https://learn.arcgis.com/en/projects/map-voter-data-to-plan-your-campaign/.

[25] Esri.

Summary Group and those that are classified within the Senior Styles group or GenXurban group. Those living within each of these tapestry groups are likely to have very different wants and needs when it comes to the political candidate they choose to support.

Additionally, ArcGIS Online is equipped with many powerful analysis tools that campaign strategists should be harnessing, in order to come to data-backed conclusions about where their potential voters are. While the statistical analysis toolset can be beneficial when it comes to quantitative data, the overlay toolset will give the most information about potential voters. This ArcGIS feature allows users to overlay multiple sets of data and create a new layer that joins existing sets to show a spatial relationship between multiple features.[26] Using ArcGIS' tools for analyzing data layers is useful for campaign staff that are looking to identify the spatial locations of particular groups of voters, such as young Black males or middle-aged white women.

Access to Polling Places

Accessibility is one of the key geographic patterns Delaware high school students should be able to identify and analyze, according to the state's Geography standards, which is defined as how easily one place can be reached from another.[27]

Accessibility of polling locations is directly tied to the geographic question "where are the voters?" because "the location, proximity, and structure of a polling station can influence how people vote".[28] A campaign that is trying to use geography to win an election needs to be sure that a lack of access to polling places is not inhibiting the work they are doing to mobilize their candidate's voters. Few polling places in a voting district are likely to create long lines that voters may not be willing or able to wait in. Although polling place locations are supposed to be determined using a combination of the area's population density, accessibility via transportation routes, and recognizability of the location, this is not always done. It is not uncommon for disparities in polling place distribution to favor white voters that have traditionally higher turnout rates, while suppressing those that belong to minority groups. Following the 2018 election, nearly fifteen percent of Black and Hispanic voters reported having trouble finding their polling

[26] Esri, "An Overview of the Analysis Toolbox," ArcGIS Pro, accessed November 30, 2020, https://pro.arcgis.com/en/pro-app/tool-reference/analysis/an-overview-of-the-analysis-toolbox.htm.
[27] Delaware Department of Education, "DE K-12 Geography Standards 2018," Delaware State Standards for Social Studies, 2018, https://www.doe.k12.de.us/Page/2548.
[28] Keranen, "Midterm Elections 2018."

locations, which impacted their ability to cast votes.[29] The decisions to turn out on election day leads all voters to perform a cost-benefit analysis and although costs differ across groups, the location of and ability to travel to polling places plays a considerable role.[30] In this era of convenience, the faster and easier potential voters can get to their polling location, the better.

Areas that are lacking in access to polling locations, which are likely to benefit from additional resources to transport potential voters to the polls, can be found by applying ArcGIS's analysis tools to a data layer that contains information about polling places. A three-minute drive between a voter's home and their polling location is optimal, according to Esri's Learn ArcGIS lesson on winning campaigns, which is not a reality for many across the state of Delaware. This distance allows for voters to quickly access the location by car, but also means constituents would not have to travel an unreasonable distance to access the polling place by foot or bicycle. It is much more likely that a resident of New Castle County, where both population and voting districts are more numerous, is able to access their polling place within three minutes of driving. This is especially true the closer someone lives to Wilmington, Talleyville, Hockessin, and Elsmere. In the New Castle area, where my students live, less than half of the residential areas are within a three-minute radius of their polling location. However, the further South a Delawarean lives, the further they are likely to live from their assigned polling location. The fact that Sussex County has population-based voting districts over three hundred times larger than some in New Castle County, with still only one polling place, means that residents of southern Delaware have to travel significantly further in order to perform their civic duties.

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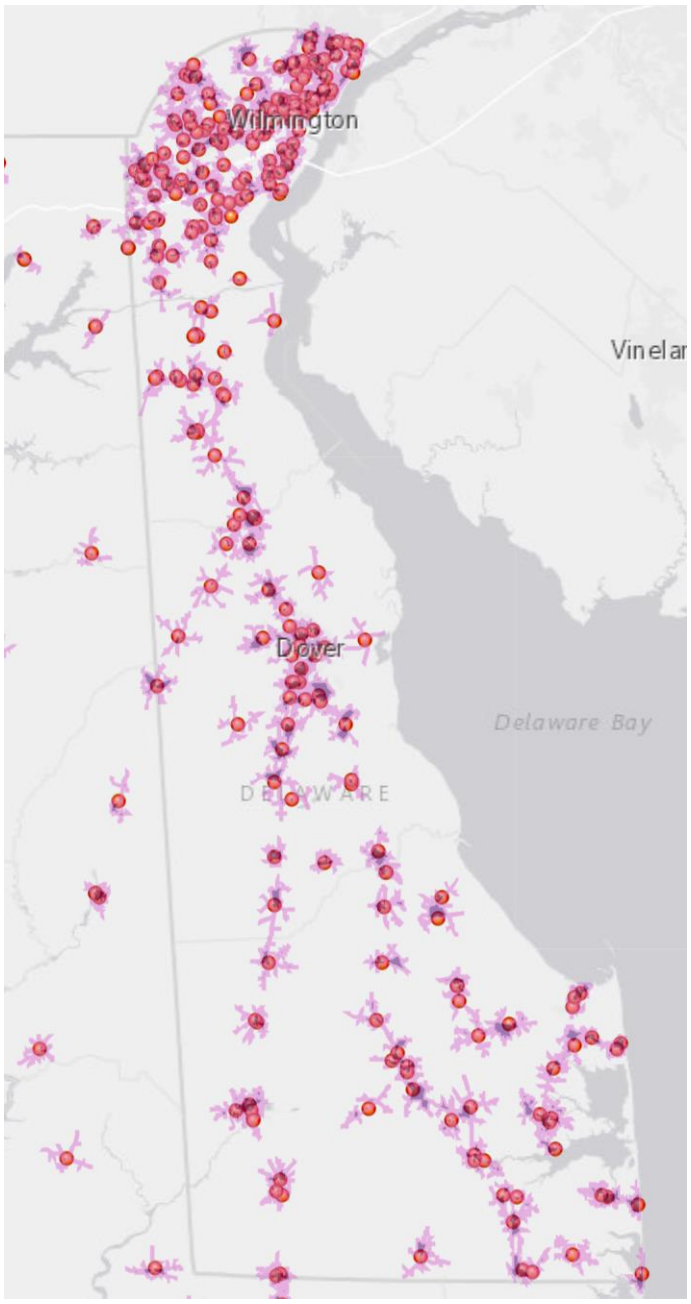
[29] Sarina Vij, "Why Minority Voters Have a Lower Voter Turnout: An Analysis of Current Restrictions," *Human Rights Magazine*, June 2020, https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/voting-in-2020/why-minority-voters-have-a-lower-voter-turnout/.

[30] Henry E. Brady and John E. McNulty, "Turning out to Vote: The Costs of Finding and Getting to the Polling Place," *American Political Science Review* 105, no. 1 (2011): 115–34, https://doi.org/10.1017/S0003055410000596.

Figure 5: Locations in Delaware within Three Minutes of Polling Place[31]



[31] Esri, "Mapping Voter Data to Plan Your Campaign."

However, the lack of access to polling places in these districts means that there are likely to be voters who do not have the ability to travel to their polling places. Developing an understanding of where low levels of polling place accessibility has the potential to impact voter turnout is crucial to a political campaign's goal of mobilizing voters. An evaluation of this data, created using ArcGIS' analysis features, allows campaign strategists to deploy volunteers and other resources in the areas of Delaware where voters need assistance most.

Teaching Strategies

Many of the students at my school are significantly below grade-level when it comes to reading and writing, so the social studies department has been focusing on weaving literacy skills into our own curriculum. This is especially true for underclassmen, who we are trying to arm with skills that will be enduring and increase their success as they progress to higher-level courses. In ninth grade social studies courses, we aim to expose students to disciplinary texts with challenging language. Our strategies allow practice using context clues to interpret them, increase the reading endurance, to learn how to select the most important details of a reading in order to write summaries, and make claims that are supported by specific evidence.

Modeling

When students are unfamiliar with something they will be doing, it is highly beneficial for the teacher to model the way students should be doing the activity. In many instances, high school teachers seem to assume that their students are familiar with what is being asked of them and simply explain the instructions and send students on their way. This can set students up for failure, putting them in a situation where they do not know what is expected of them or are overwhelmed by a vague understanding of the assignment. Modeling is especially useful when introducing students to disciplinary-specific texts, which varies greatly from the types of reading they are familiar with. Many social studies teachers have become so familiar with the type of thinking we need to engage in order to interpret social studies sources, to the point that it becomes second nature. When modeling these sources, it is necessary for teachers to prepare the source by examining it for specific contextual clues about the information, the author's main idea and supporting details, words or phrasing that may be unfamiliar to students, and questions that could be asked of the document. This approach prepares teachers to model their thinking for students and allows our students to see examples of what they should be looking for in various sources. Throughout this unit, modeling will be especially useful as students read maps and work towards increasing their geographic literacy.

Collaborative Pairs

Using collaborative pairs is a great way to ensure that all students remain engaged in the activity and learn the desired information from the lesson, while identifying any misconceptions. In a world where students seem to prefer to live 'in their own worlds' and would much rather communicate with others through digital formats, getting them to engage in actual conversation with someone else seems to push some students outside of their comfort zones. Making deliberate choices in student pairings can serve to provide support for students that perform at a lower level and encourage students to acknowledge the ideas of others, instead of simply taking their own ideas as fact. Working in pairs eliminates the intimidation that can accompany speaking in front of larger groups or the possibility of one student being overruled by a majority group that shares the same ideas or opinions. Collaborative pairs are often used during Think-Pair-Share activities, where students are asked to start by coming up with their own ideas about a particular topic before exchanging ideas and discussing with their partner, and ultimately having a class discussion on the topic. In this unit, it would be useful to use this teaching strategy as students draw conclusions about the information maps tell us about voters and how campaigns may use this data.

Writing Summaries

One of the most common struggles my ninth graders face in their writing is the ability to write summaries after interacting with some sort of discipline-specific source, whether in print or digitally. They have an idea of what it means to summarize something and if I ask them to summarize the class period or something else that they have experienced first-hand, they are easily able to pick out the main ideas and provide a short overview of a large amount of information. However, when asked to summarize in an academic situation, whether verbally or in writing, students often have difficulty and will pick out secondary details but overlook the main idea. Accordingly, it is important for students to continually practice writing summaries and refining their skills. When we work with summarization at William Penn, students are reminded of the acronym TWINE, which tells them that summaries should tell the reader the topic of what they are summarizing, explain what they learned, be in their own words, not be too long, and include essential vocabulary. In this unit, it will be essential for students to be able to summarize their findings after interactions with various GIS data.

Evidence-Based Writing

Another area of writing that my students display weaknesses in is making claims that are backed by evidence, as well as explaining how the evidence they have chosen is helpful in supporting the argument they are trying to make. Being pushed to write in this fashion can be unfamiliar and uncomfortable for students that have grown used to hunting for answers within a text and copying it down on their worksheet word-for-word. My school uses the acronym CSET (claim, support, evidence and tie-up) to provide our students with a framework for what evidence-based claims ought to look like. Students are taught

that their writing should generally follow the format of making a claim, supporting the claim with their own words, providing evidence from the source and then explaining the evidence as they tie it up. Even more challenging for students than citing evidence from a text, is citing evidence from a map, where there are no words that they can choose and put quotation marks around. In this unit, students will need to incorporate geographic evidence in their writing, as they explain how geography can be used to win an election.

Digital Mapping

In addition to increasing students' literacy skills, I believe it is important to teach them the educationally appropriate ways they can benefit from the use of technology. This unit lends itself to incorporating technology through the use of online mapping software, such as Google Maps and ArcGIS. The use of Esri's ArcGIS software is central to this unit, as students select relevant demographic data layers and look for mapped patterns. As they work through this unit, students will go beyond selecting data layers and work towards analyzing them through the inquiry process.

I Notice, I Wonder

As students work towards developing their geographic literacy, it is important for them to become comfortable verbalizing their thoughts and identifying specific mapped details that can later be used in their evidence-based written responses. Using this strategy, students are pushed to really spend time looking at a source, so that they can pick out specific information from it. This is especially useful with visual sources, such as maps, that provide a significant amount of information. Then having students identify something that they wonder about the source gets them familiar with questioning the information they are given and engaging in sourcing of it. Conversations surrounding the things students wonder about a map can lead to conversations about who created it, the intended purpose, the choices that were made about what data should and should not be included, as well as how the content is presented.

Observe, Reflect, Question

Observe, Reflect, Question is a strategy that provides students with a framework for critically observing an image and works especially well in guiding them through map analysis. This framework provides them with specific questions from a geographic lens, that they should be asking about each map that they encounter. In the observe phase, they are looking at information that is directly on the map- the text, the spatial location being shown, the human and physical features, the key, and how symbols or colors appear on the map. Once they have really taken in the information being shown, students move on to reflecting, where they draw conclusions about the purpose of the map, identify spatial patterns, consider biases that are evident, and make inferences about the data being depicted. The map analysis is concluded with the questioning phase, where students

answer questions about why the map is important, how the map could be used, and how it connects to existing knowledge. Using this framework each time students encounter a map throughout this unit will work towards developing their geographic literacy and make the process more automatic when they are presented with maps in the future.

Classroom Activities

Title: A Tale of Two Delaware's

Essential Question: How are different areas of Delaware demographically similar and different ?

This lesson is intended to help students develop an understanding of the political differences throughout Delaware. They will examine voting trends at various scales and summarize the differences in voter behavior throughout the state.

Anticipatory Set: How is Southern Delaware different from Northern Delaware?

Lesson Details: The concept of Northern Delaware being very different from Southern Delaware is one that my students are familiar with and excited to talk about when it comes up in the course's content every year. Many of them come to class with the idea that Delaware "below the canal" has much more in common with states in the south than New Castle county and are quick to describe its' rural land use, slower way of life, and abundance of Donald Trump logos on signs, bumper stickers, and flags. This lesson is intended to get them thinking beyond these stereotypes and actually looking at data before drawing conclusions about the political behavior of people living in various locations around the state. Students will begin the lesson by brainstorming the differences between the Northern and Southern portions of the state and using this knowledge to predict how this will impact their political ideologies. They will then use the Observe, Reflect, Question framework to analyze mapped data about election results at the state-, county-, and election district-level. As students are presented with each new map, it should be noted that the scale of the data on the map they are evaluating has changed. As the map scale gets smaller, students should begin to notice that Delaware is more complex than the solid blue state that appears on electoral maps. Their process of reflecting and questioning should lead them to making some conclusions about the Republican districts in New Castle County, as well as the Democratic districts in Kent and Sussex counties. At the conclusion of the lesson, students should understand maps that show data in the smallest scale tell a more detailed story are most useful in identifying voting patterns.

Title: Creating the Ideal Political Candidate in Delaware

Essential Question: What characteristics make a political candidate ideal across Delaware?

This lesson will allow students to combine what they learned about the voting patterns of Delawareans in the previous lesson with information about various political parties and their ideologies. It will result in the creation of a fictitious political candidate that they believe will resonate with the beliefs of citizens across the state.

Anticipatory Set: Why do two main political parties dominate in the United States, even though there are more?

Lesson Details: Students' prior knowledge about the role of third parties in the American two party political system will be activated at the start of this lesson. This is important, as when we begin to examine candidates more closely, it seems that my students always find a third party candidate that they feel strongly about. It is important that they start this lesson with a reminder that third party candidates play an important role in the political system, but as they work towards creating a candidate that will be successful in Delaware, it will likely need to be a candidate that belongs to the Democratic or Republican party due to the country's current political nature. Students will then demonstrate their understanding of political parties, the political spectrum, and the campaign process by creating their own fictitious Delaware political candidate. This assignment will require them to come up with background information on their candidate, including their beliefs on the purpose of government, where they fall along the political spectrum, and the political party that they are associated with. A platform for the candidate is also necessary, which identifies three to five most important issues and the candidate's stance on them. The lesson will conclude with students creating a digital poster with information about the political candidate each student has created using either Google Draw or Canva. This lesson applies what the Delaware voting patterns they identified in the first lesson and lays the groundwork for the mapping activity they will do in the next lesson.

Title: Mapping Your Political Campaign

Essential Question: Using mapped demographic data, where should a given political candidate focus their campaign efforts?

This lesson will allow students to demonstrate their knowledge of the role of political parties in the campaign process, as well as the ArcGIS skills they have developed. They will use demographic data to create their own GIS maps and then analyze the patterns in their maps, in order to make data-driven campaign decisions for their fictitious political candidate.

Anticipatory Set: In addition to the candidate they selected, what other information would be helpful to have about voters?

Lesson Details: Students will work towards the goal of answering this unit's overarching geographic question of "Where are the voters?" as they work through this lesson. Now that they've developed an understanding of where each political party has previously been successful in Delaware, they will use mapped data to gather further insight and make predictions about how well the candidate they've created will do in Delaware. The first step towards doing so is gathering information about voter demographics. This can be done by using the I Notice, I Wonder strategy to look at voter demographic data from Pew Research Center for 2016[32] and 2020.[33] These charts will get students thinking about the demographic groups that are politically active, as well as the political parties that each demographic group generally associates themselves with. Following this activity, the class should work together to brainstorm what demographic data they will need about Delawareans in order to make predictions about the success of their own candidate. Students should identify demographic indicators such as gender, age, race, ethnicity, religion, education level, socioeconomic status, political party membership, and community type.

After brainstorming students will create their own maps using ArcGIS Online, by looking for data layers that show the demographic information they are looking for. Once students know how to search for a data layer in the Living Atlas, they are usually pretty proficient and creative with the maps they create. However, if they are having trouble the Popular Demographics in the United States layer created by esri_demographics is very helpful, as data is available at various scales, down to the Census block group, and can be separated to show many of the demographic indicators identified above. Each data set can be separated by selecting the "Change Style" icon and then selecting an attribute from the dropdown menu. Other helpful layers include 2020 USA Median Age, 2020 USA Diversity Index, 2020 USA Tapestry Segmentation (all created by Esri) and Citizen Voting Age Population by Race and Ethnicity (created by juliah_esri). The Tapestry Segmentation layer could be interesting for students, as it provides an overview of the general tapestry of each Census block, allowing students to make predictions about how their candidate will do among the "American Dreamers" compared to the "Rustbelt Traditions". Once demographic data is applied to their maps, students should experiment with the best way to visually represent data and use ArcGIS' analysis tools to look for patterns among data such as the overlay tool.

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[32] "An Examination of the 2016 Electorate, Based on Validated Voters."
[33] John Gramlich, "What the 2020 Electorate Looks like by Party, Race and Ethnicity, Age, Education and Religion," Pew Research Center FactTank, 2020, https://www.pewresearch.org/fact-tank/2020/10/26/what-the-2020-electorate-looks-like-by-party-race-and-ethnicity-age-education-and-religion/.

Students will demonstrate their learning in this lesson by developing a written outline of how their candidate should approach campaigning. This will require them to identify which demographic groups they expect their candidate to be popular with, describe where in Delaware the candidate should campaign in order to make connections with voters of the identified demographic groups, and list the campaign activities that they recommend the candidate engage in, in various locations across the state.

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Appendix: Implementing District Standards

Delaware Geography Standard One B, 9-12 Benchmark: Students will apply the analysis of mapped patterns to the solution of problems.

Students will work towards meeting this standard as they interact with mapped data throughout the course of the unit. In this unit, they will use a geographic lens and apply mapped data to multiple problems, such as the lack of access to polling places, but will also be working towards solving the overarching problem of needing to win an election. They will demonstrate their understanding of the standard with the map they create for their fictitious political candidate’s campaign.

Delaware Civics Standard Two A, 9-12 Benchmark: Students will examine and analyze the extra-Constitutional role that political parties play in American politics.

Throughout this unit, students will be reinforcing the geographic analysis skills they are developing with content related to the extra-Constitutional role of political parties. In order to demonstrate their understanding of geography's role in winning an election, students will need to develop an understanding of the purposes of political parties, as well as the role these groups play in conducting campaigns. Students' understanding of the standard will be demonstrated as they develop a campaign plan for their fictitious political candidate.

CCSS.ELA-LITERACY.RH.9-10.7

Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.

Students will meet this standard as they create written pieces that explain how geography can be used to craft a winning campaign strategy, incorporating information from various activities throughout the unit. They will have the opportunity to interact with primary and secondary readings about the role of political parties in campaigns, as well as mapped data. As students craft written responses throughout the unit, they will be required to draw on both quantitative and qualitative data.

Attachments

1. Synopsis
2. Learning Focused Map

Endnotes