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ABSTRACT

This North Carolina project utilizes computer technology to engage students in activities that encourage them to become well-informed voters. The activities are organized into four separate modules. The first module contains student activities designed specifically for the 1992 Presidential election. These activities include: media research, demographic analysis, using the demographic spreadsheet, using the opinion survey spreadsheet, voter registration, mock election, and post election analysis. The second module includes materials that describe the use of and instructions for a computer database of North Carolina counties. The materials in the third module describe the use of and instructions for a computer spreadsheet that uses student decisions and North Carolina demographic data to project the outcome of any political election. The fourth module contains materials that describe the use of and give instructions for a computer spreadsheet that uses student decisions and multi-site survey results to project an outcome of any election. Forms for ordering the computer software needed to conduct these activities are included in this document. (DB)

SO

VoteLine

A Project for Integrating Computer Databases, Spreadsheets, and Telecomputing into High School Social Studies Instruction

Developed Jointly by
Social Studies Section,
Division of Curriculum & Instruction

&

Computer Services Section,
Division of Media and Technology

North Carolina Department of Public Instruction

Fall, 1992

Foreword

In a rapidly changing world in which technology brings national and world events daily into our homes and offices, we have become more aware of the importance of being responsible citizens and well-informed voters. It is one of our tasks, as educators, to help North Carolina students recognize this responsibility.

The activities in this **VoteLine** booklet are designed to provide students opportunities to conduct voter surveys, form campaign committees, and register voters for a mock election. Students will research the issues of an election, explore demographic characteristics of North Carolina, and examine the candidates for political office. Using the information they gather, they will make decisions about the relationships between the campaign issues and the voters and use computers to determine how these relationships affect who wins the election.

Students gain social studies competencies as well as computer skills as they participate in these **VoteLine** activities. In fact, **VoteLine** is an excellent model for integrated and collaborative learning.

We extend a special "thank you" to the teachers who participated in the **VoteLine** pilot and to the Program Services consultants who worked with them to deliver these activity guides. I know you will find these materials valuable for the 1992 election and for future campaigns.

Bob Etheridge
State Superintendent of
Public Instruction

Contents

VoteLine '92

Background

VoteLine was developed cooperatively by the Social Studies and Computer Services sections of the North Carolina Department of Public Instruction as a model for integrating computer technology and skills into high school social studies instruction.

The project was piloted during the 1990 North Carolina Senate race in 15 high schools from Buncombe to Dare Counties. The overwhelmingly positive response to the pilot project revealed the degree to which students were engaged by the activities, motivated to learn about the issues and candidates, and inspired to discuss and analyze what they learned.

Overview

The **VoteLine** project is designed to foster effective citizenship by engaging students in activities that encourage them to become well-informed voters. In addition to becoming informed voters, students participating in **VoteLine** will gain insight into the forces involved in the election process. Intelligent voting and participation in the electoral process require an understanding of the electorate, the issues, and the candidates. Participation in **VoteLine** will give students an opportunity to develop this understanding and to use it in a variety of problem-solving activities. It will encourage student interaction, active learning, use of information technologies, decision making, and communication.

Competency Goals

Each of the goals found in the **North Carolina Standard Course of Study** for Social Studies and Computer Skills will be enhanced as a result of participation in the **VoteLine** activities.

Social Studies Goals

- The learner will acquire information from a variety of sources.
  Students will acquire information from print and electronic media as well as opinion surveys.

- The learner will use information for problem solving, decision making, and planning.
  Students use data and other information to make decisions, solve problems, and plan processes and operations.

- The learner will demonstrate skill in self-management and social participation.
  Students will enhance their self-management skills by considering issues from numerous sources and perspectives, and modifying their positions when the circumstances or the factual basis for their positions change. In addition, they will become keenly aware of the manifestations of diversity within the electorate.

- The learner will participate effectively in civic affairs.
  ***VoteLine** provides an opportunity for students to be actively involved in the election process by allowing them to make and test decisions based on political and demographic data. Participation in project activities also enables students to involve others. By voting and involving others in the mock election, students will hone their skills of civic participation.*

Computer Skills Goals

- The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology
  Students will discover and understand some of the implications that the use of information technologies has on democracy and politics.

- The learner will demonstrate knowledge and skills in using computer technology.
  Students will enhance their skill in using computer database and spreadsheet applications.

- The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.
  ***VoteLine** provides for student use of telecomputing and CD-ROM technology for accessing information; databases and spreadsheets for analyzing, interpreting, and applying data; and word processing and telecomputing for communicating information.*

VoteLine Activity Guides

The **VoteLine** activities have been developed as five separate modules as a result of feedback from the 1990 pilot project. Some teachers found it difficult to schedule large blocks of time for all of the activities; therefore, these stand-alone modules allow more flexibility for teachers who may wish to use one or all activities.

VoteLine '92 Activities Guide ..... This set of materials includes descriptions of the **VoteLine '92** project, timeline calendars, activities information, and other materials that are specific to the 1992 presidential election.

Module I Activity Guide ..... This set of materials describes the use of and gives instructions for a computer database of North Carolina counties. Also included are four activities: a map activity; a politics and demographics activity; a letter writing activity; and a campaign role-playing activity.

Module II Activity Guide ..... This set of materials describes the use of and gives instructions for a computer spreadsheet that will use student decisions and North Carolina demographic data to project an outcome of any political election.

Module III Activity Guide ..... This set of materials describes the use of and gives instructions for a computer spreadsheet that will use student decisions and multi-site survey results to project an outcome of any political election.

Module IV Activity Guide ..... A fifth guide providing information on using either the FrEdMail or Learning Link telecomputing networks will be available on August 1, 1992. A form for obtaining a copy of this telecomputing guide is on page 5.

Each of the module guides contains specific, technical instructions for the **VoteLine** activities but is also designed to stand alone as a separate, short-term, classroom project. Modules I, II, and III have also been designed for use after the 1992 presidential election in conjunction with other elections or with fictitious elections.

Materials

You will need the following equipment and software:

One or more student computer work stations. The computer(s) should be one of the following hardware/software configurations:

Apple IIe, IIc, or IIgs with printer and AppleWorks™ software version 2.0 or greater

Any MS-DOS computer with printer and Microsoft Works™ software version 2.0 or greater

Macintosh Plus, SE series, LC, or II series with printer and Microsoft Works™ software version 2.0 or greater

One telecomputing computer station:

The same type of computer used for the work stations but equipped with a modem, phone line, and telecomputing software

The VoteLine Diskette and Module IV Activity Guide will be available from The North Carolina Department of Public Instruction beginning August 1, 1992

Complete the form, cut here, and mail as indicated

VoteLine Order Form

Please copy the VoteLine Diskette in the format marked below on the blank double density diskette enclosed. (Enclose a separate diskette for each format needed)

Computer	Diskette Type	
Apple II	[ ] 3.5"	[ ] 5.25"
Macintosh	[ ] 3.5"	
MS-DOS	[ ] 3.5"	[ ] 5.25"

Please send me a copy of the VoteLine Module IV Activity Guide for the following telecomputing network(s).

FrEdMail	[ ]
Learning Link	[ ]

Name: _____

School System: _____

School: _____

_____

Address: _____

_____

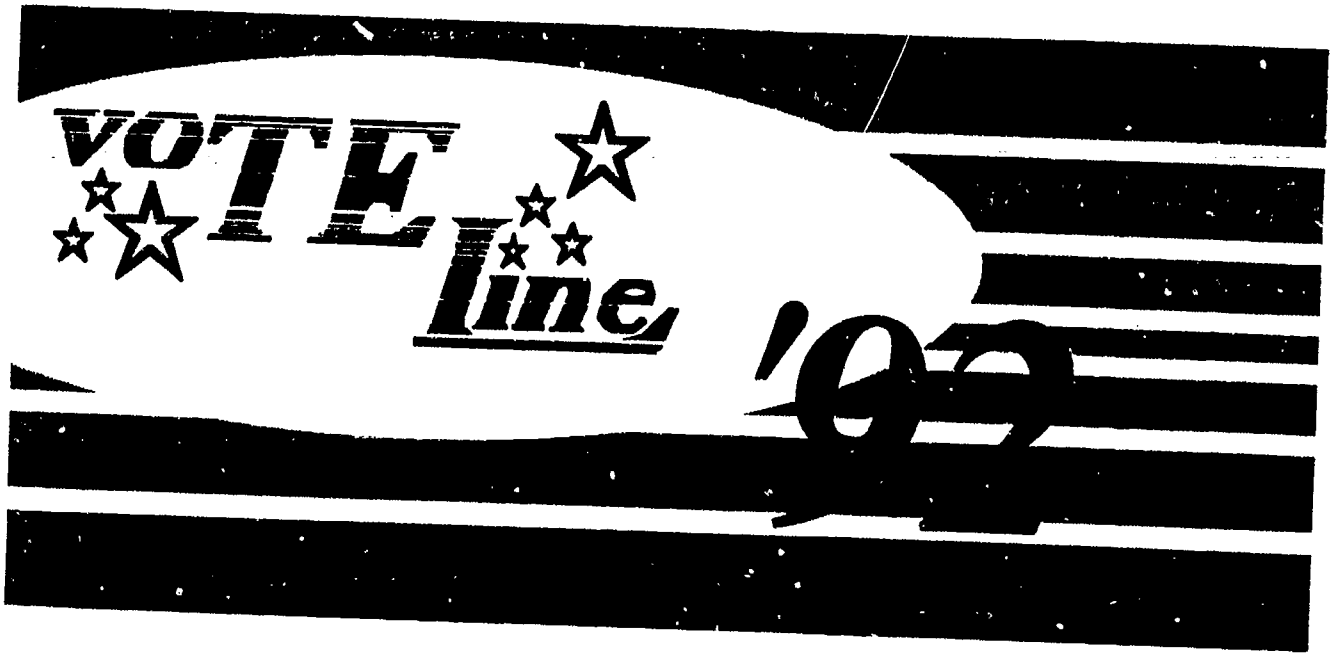
_____

_____

Phone Number: _____

Mail this form to:

VoteLine
Computer Services
North Carolina Department of Public Instruction
116 West Edenton Street
Raleigh, North Carolina 27603-1712



Student Activities for the 1992 Presidential Election

Developed Jointly by

Social Studies Section,
Division of Curriculum & Instruction
and
Computer Services Section,
Division of Media and Technology

North Carolina Department of Public Instruction

Fall, 1992

VoteLine '92

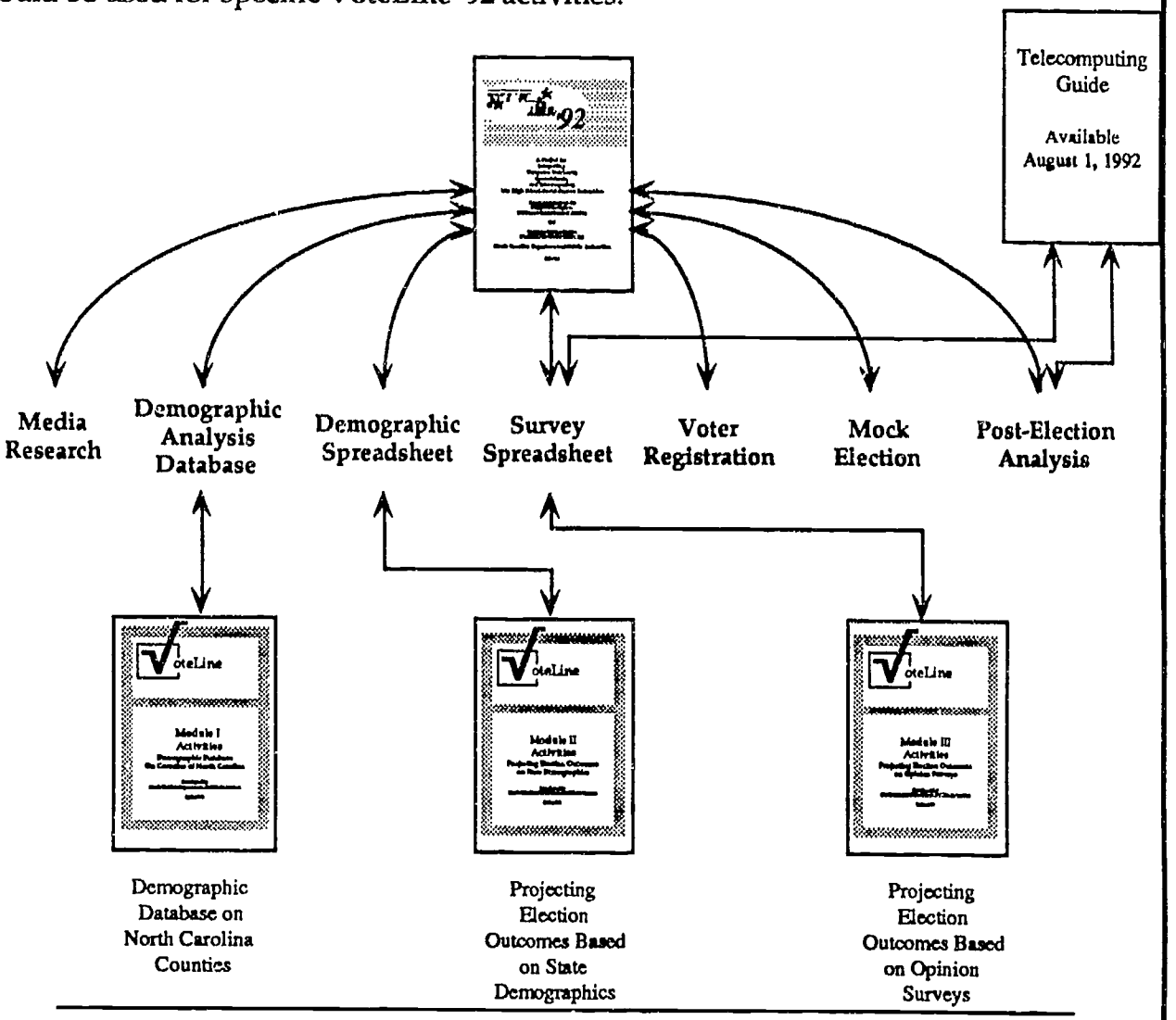
Contents

Introduction

The **VoteLine '92** Student Activities booklet includes classroom materials on the U.S. election process with the 1992 presidential election as the example. Students will use these materials to research the campaign issues, to work with computer databases and spreadsheets for problem solving, to conduct electronically-shared opinion surveys, and to hold a mock election.

VoteLine '92 and the Module Activity Guides

The diagram in Figure 1 will help in determining which of the Module Activity Guides should be used for specific **VoteLine '92** activities:



This diagram shows the seven activities of the **VoteLine '92** project. The arrows indicate where information and instructions for each activity will be found. All seven activities are addressed in the **VoteLine '92** activity guide. The Demographic Analysis, Demographic Spreadsheet, and Survey Spreadsheet activities are also found in the three module guides. In addition, the Survey Spreadsheet and Post-Election Analysis activities will contain instructions found also in the Telecomputing Guide (available on August 1, 1992).

Figure 1

Brief Overview of VoteLine '92 Activities

Activity 1: Media Research

Students will research information about the issues, candidates, and the electorate from a variety of print and electronic media. Utilizing cooperative learning techniques, they will share and discuss the information they have collected and make conclusions based on the information. (September 21 - November 20)

Activity 2: Demographic Analysis Database

Students will use a computer database to identify and categorize North Carolina counties based on demographic characteristics. They will participate in a number of activities that require them to make decisions based on their interpretations of the computer data. (September 28 - October 9)

Activity 3: Using the Demographic Spreadsheet

Students will make decisions about the relationships among issues, candidates, and the electorate; code their decisions; and enter them into a computer spreadsheet. They will use the spreadsheet to calculate projected outcomes of the election, based on their decisions, and to test "what-if" scenarios. (October 5 - October 9)

Activity 4: Using the Opinion Survey Spreadsheet

Students will conduct an opinion survey to gain insights into how people feel about current issues. They will conduct the survey locally to enter their survey results, with those collected from other sites across the state, into a computer spreadsheet. Students will also make decisions about the candidates and the issues in the survey; code their decisions; and enter them into the spreadsheet program. Then, students will use the spreadsheet to calculate projected outcomes of the election and to test "what-if" scenarios. *(October 12 - October 30)*

Activity 5: Voter Registration

Students will organize a voter registration drive for members of the student body in preparation for a mock presidential election. *(October 12 - October 30)*

Activity 6: Mock Election

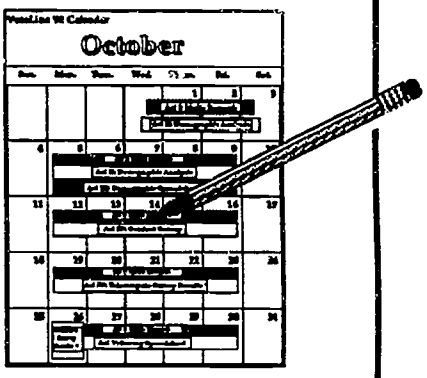
Students will hold a mock presidential election on the day of the general election. *(November 3)*

Activity 7: Post-election Analysis

Students will share their mock presidential election results and the results of the general election in their county with other participating schools in North Carolina over the available computer networks. Then they will compare the school mock election results with general election results and the computer-projected results. *(November 4 - November 20).*

Suggested Instructional Strategies

It is not necessary to participate in all of the **VoteLine '92** activities; however, **Media Research** is a prerequisite for most of the other activities and should be used. **Media Research** must be on-going and concurrent with the other activities so that changes in issues, events, and campaigns can be reflected in the students' decisions. The **Opinion Survey** and **Voter Registration** activities also can be conducted concurrently.



The calendars on pages 15, 16, and 17 can help you track **VoteLine '92** activities from week to week. Color or shade the bars of the activities that you plan to use, so that they can be identified easily on a daily basis.

Grouping your students to conduct these activities will depend in large part on: 1) the number of computers available; and 2) the setting in which your students will use them. A number of the activities, however, do not require intensive computer use and lend themselves to cooperative/collaborative learning techniques. If groups or teams choose or are assigned to specific activities, the activities can be completed in less time than when all students participate in all activities.

VoteLine '92 Activity 1: Media Research

In this activity, students will acquire information about the issues and candidates from a variety of print and electronic media. Using cooperative learning techniques, students will share and discuss the information they have collected and make conclusions based on the information.

Spend at least one class session discussing the issues that are probably on people's minds during the presidential campaign. Issues should not be limited to those being discussed by the candidates; some of the issues that are important to people often are not addressed directly by candidates. Make a running list of issues as they are agreed upon by the class.

Issue Grouping

Divide the class into groups of eight students and ask them to come to consensus on the four most important issues. When consensus has been reached, students should work in pairs, with each pair responsible for researching one of the issues. They become "experts" on the issue they research. *(See Figure 2.)* Opportunities for research should be scheduled periodically throughout the project with agreed-upon deadlines, with students reporting to their main group. Potential sources of information are newspapers and magazines, reference books, CD-ROM and on-line indexes and databases, and news broadcasts on cable, radio, or television.

Note: Taxation and reduction of the deficit, health care, affirmative action, education, and defense are the issues being addressed in the survey activity. You may want your class to research these issues, as well.

At every research deadline, each pair of students should report to the rest of their group on the issue they have been examining. Encourage the teams to supplement their reports with audiovisual enhancements such as graphs, outlines, video recordings, computer presentations, etc.

Candidate Grouping

The main groups should also be divided into two subgroups of four students, with each subgroup being responsible for researching one of the presidential candidates. *(See Figure 2.)* This grouping should be arranged so that one expert on each issue is in each candidate group. *(The grouping scheme can be altered depending on class size and other*

considerations.) Sources of information will be campaign literature, newspaper and other print media coverage, radio and television advertising, and radio and television news broadcasts. *Forms to help students keep a log as they monitor the various media are included at the end of this guide. (See student handouts on pages 20 - 25.)*

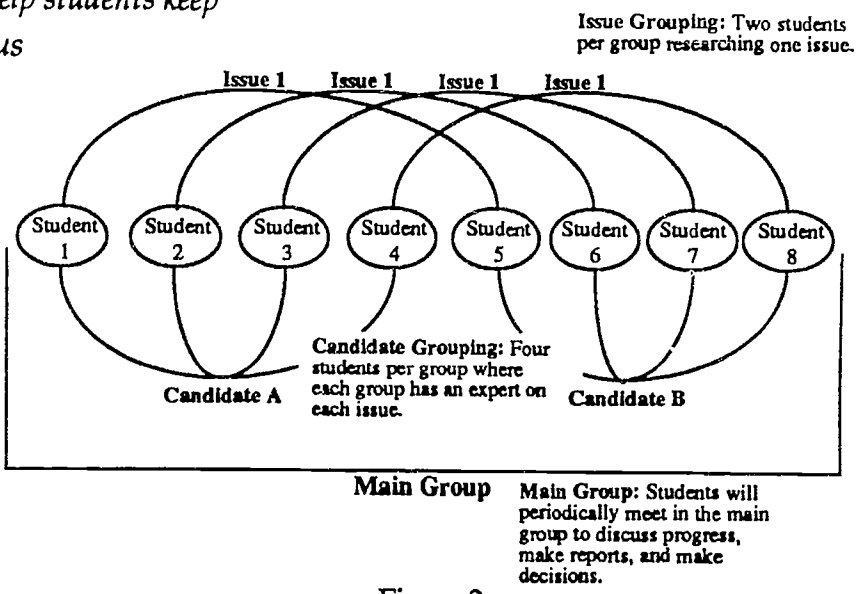


Figure 2

Again, after scheduled research periods, subgroups should report to the rest of their group on the candidate they have been studying.

About once a week, conduct full class discussions about the information that students have gathered. In addition to events and political positions, discuss the following questions:

- Where are voters getting their information about the candidates?
- Do the media coverage and paid advertisements focus on any of the following more than others: the candidate's record, the candidate as a person, the candidate's goals, etc.?
- Do you know enough about the candidates to cast an informed vote?
- Can you explain the steps you took to gather information and to compile the information so it can be shared?

Time: September 28 — October 9

VoteLine '92 Activity 2: Demographic Analysis Database

In this activity, students will use a computer database to examine the demographic characteristics of North Carolina. As they analyze the data, students will become familiar with the characteristics of various regions of the state.

Students will learn how the counties rank in each category by sorting the database by appropriate categories. For instance, by sorting the fields that represent voter registration in 1980 and 1990, students can see which counties have the largest concentrations of registered Democrats or Republicans.

Properly constructed database selection sentences enable students to see the demographic profiles of individual counties or a region. If students understand the characteristics of a county or region they will be able to make inferences about where the major candidates will have the most strength in the election and how candidates might alter their campaigns. An important activity will be to require students to construct maps, charts, and graphs that show the locations of residents who fall into the demographic categories most relevant to the election. By transferring the data to maps and charts, students will develop a mental picture of how the state appears demographically. This mental map is crucial to completing a number of the activities that follow and to understanding elections in North Carolina. Discussions of the maps and the results of the various sorts and searches will result in a better understanding of the electorate. These discussions will cause students to think about which groups are most important to the outcome of an election.

In this demographic analysis activity, students will participate in a number of separate activities that require them to make decisions based on their analysis of the computer data. The following activities are described in the Module I Activity Guide; use the guide for instructions on conducting these activities. The activities are:

Map Activity ..... Students will identify counties which rank highest and lowest in a variety of demographic categories. They will also shade the counties on a political map of North Carolina indicating any geographic patterns. (Module I Activity Guide, p. 4)

Politics and Demographics Activity ..... Using the North Carolina computer database, students will identify counties which would benefit from specific political actions and those that would

experience difficulties as a result of those political actions. Students report findings to the class. (Module I Activity Guide, p. 6)

Letter Writing Activity ..... Students will use the North Carolina computer database to identify and study counties with low education levels. They will then write a letter to one or both candidates, reporting the data and asking what actions the candidate would take, as president, to improve the situation. (Module I Activity Guide, p. 7)

Campaign Manager Activity ..... Using the North Carolina computer database as a data analysis tool, students act as a campaign committee by planning budgets and writing speeches. (Module I Activity Guide, p. 8)

This activity should lead students to consider questions such as:

- Where are the highest concentrations of Democrats and Republicans in North Carolina?
- Where are the poorest and richest counties?
- Which counties have the highest percentages of older citizens or younger citizens?
- Is there a relationship between wealth and party affiliation? location and education level? population density and per capita income?
- What additional information would you like to have that is not in the database?

VoteLine '92 Activity 3: Using the Demographic Spreadsheet

In this activity, students will make decisions about the relationships among issues, candidates, and the electorate. They will code their decisions and enter them into a computer spreadsheet which will factor the students' decisions along with demographic data to calculate projected outcomes of the presidential election.

Before working with the demographic spreadsheet, students should have fully discussed the information collected in the Media Research activity and in the database demographic analysis. This background information will make it easier for students to judge which candidates have an advantage in relation to each of the demographic categories included in the spreadsheet. Specific instructions for completing this activity are in the Module II Activity Guide.

Under some conditions it may be interesting to both the students and the teachers to attempt the demographic weightings as a pre-test and compare the results of weightings before and after research on the candidates and state demographics.

The demographic spreadsheet will allow students to apply what they have learned about the candidates, campaign issues, and the state. The students may use the demographic spreadsheet to explore the impact of various groups on the outcome of the election. In order to do this, students assign a weight from 0 - 10 in the appropriate category and use the spreadsheet to calculate projected outcomes of the election. By varying the weightings, a student can see the probable impact of individual ratings or a combination of ratings on the outcome of the election.

This activity should lead students to consider questions such as:

- Which category of voters seems to affect the projected outcome the most? Explain.
- Which groups are most likely to have an interest in fiscal matters?
- Which groups are most likely to favor strong government initiatives in the area of health care?
- Which groups are likely to have a strong feeling about fighting crime?

VoteLine '92 Activity 4: Using the Opinion Survey Spreadsheet

In this activity, students will conduct a state-wide opinion survey. They will use the results of the survey and a computer spreadsheet program to calculate a projected outcome of the 1992 presidential election.

Students will gain insight into what people are thinking and feeling regarding the election by polling a cross section of people in the community. Students are not expected to become professional pollsters, however, they should be guided to think about the type of sample they choose. Do they want to know what senior citizens are thinking, or do they want to learn what a cross section of the community is thinking? The type of sample and the size of the sample should be understood before students actually administer a survey. The samples do not have to be very large in order for students to get a sense of where people stand on most issues. If each student in a class of 30 polls 5 people a lot of data will be collected. If smaller groups are conducting polls, each student may need to survey a larger number of people. Students may administer the survey in a number of ways. They can interview respondents by phone or in person and record the answers. They may want to distribute printed surveys, allow the respondents to complete them, and then collect them.

The activities for conducting the opinion survey are described in the Module III Activity Guide. They include:

Students will conduct an opinion survey consisting of five statements. Participants in the survey will indicate whether they approve or disapprove of each statement and how important the statement is. The class will compile the results of the survey and telecompute the results through one of two North Carolina computer networks, FrEdMail or Learning Link. (Module III Activity Guide, p. 3)

Students will electronically retrieve the election results from other high school social studies classes and enter the results of up to twelve of the sites into the survey spreadsheet. (Module IV Activity Guide, *to be available August 1, 1992*)

Meanwhile, students will continue their research, looking for evidence of the candidates' positions on issues addressed in the survey. Once they have determined the candidates' positions, they will code this information and enter it into the survey spreadsheet. (Module III Activity Guide, p. 10)

When all of the data has been entered into the spreadsheet, students will use the spreadsheet to calculate a projected outcome to the election. (Module III Activity Guide, p. 12)

Students will discuss possible events or scenarios and test the "what if" scenarios by altering the data and re-calculating the projected election results. (Module III Activity Guide, p. 13)

The opinion survey with the statements for **VoteLine '92** is at the end of this **VoteLine '92** activities guide. Discussions of the survey results may be guided by asking questions such as:

- Do results support assumptions made before the survey was administered?
- Have you changed your personal opinion as a result of working with the survey?
- Are there any differences between the opinions of people in the three regions of North Carolina in regard to the issues addressed in the survey? If so, please explain.
- What did you learn from the survey results that you did not already know?
- Which issues seem to be most important to the candidates?
- Based on the survey results and spreadsheet analysis, do candidates need to modify their campaign strategy?

Time: October 12 — October 30

VoteLine '92 Activity 5: Voter Registration

During this activity, students will organize a voter registration drive for members of the student body who wish to participate in a mock presidential election. Students should design a registration form including information such as name, grade level, political party, gender, and ethnic group.

This activity should be organized so that students can register at times when they must take the initiative: before school, during breaks, during lunch, and after school. Depending on the size of your school and the sophistication of your students, you may want to register students by precinct.

Following the registration, compile voter registration lists to use on the day of the mock election. If students have sufficient skills, it is desirable to have them create a computer database for use in the mock election.

In classroom discussions, students should be encouraged to reflect on their plans and the actual implementation of the voter registration drive. Student discussions about voter registration may be stimulated by questions such as:

- How did potential voters respond to the mock voter registration drive?
- What problems arose in registering for the mock election? Were the problems due to poor planning?
- What reasons did people give for not registering to vote in the mock election?
- Did the opportunity to vote seem important to the people you talked with? Why?

Note: This activity may be extended by facilitating student involvement on a voluntary basis in an actual voter registration drive within the community. A campaign within the school and community to register eligible voters will be a valuable experience for students participating in ***VoteLine '92.***

VoteLine '92 Activity 6: Mock Election

On election day, allow properly-registered students in your school to vote using a facsimile of the ballot used in the general election. At a minimum, include the candidates for president; at the teacher's discretion, candidates for local offices or state races may be included. The votes should be tallied so that the results can be announced no later than the next morning.

Students should reflect on the mock election by responding to questions such as:

- What percentage of the registered voters voted in the mock election?
- What problems arose on the day of the election?
- Did any of the problems open the door for accusations of voting irregularities?
- Did voters seem prepared to cast their ballots?
- If voters were confused, which races or procedures caused the most confusion?

VoteLine '92 Activity 7: Post-election Analysis

The results of the election for a single site or several sites may be analyzed to determine which issues and which factions had the greatest impact on the outcome. Ideally, participants in the project can benefit from having results from several locations. The results of your mock election and the general election in your county should be transmitted to others participating in the project on the day following the election via a telecomputing network. *(See the form for obtaining the Module IV Activity Guide on telecomputing on page 19.)*

The election results should be electronically exchanged and analyzed within five school days after the election. Information should include the name of the county, the percentage of the vote cast for each presidential candidate in the mock election, and the percentage of votes in the county for each presidential candidate in the general election. Making this data available will enable students to compare the mock election and general election results with anticipated results based on the spreadsheet projections. Once the analysis is complete, students can use the results to create dot maps, charts, or graphs that will graphically show the outcome of the election.

Have students assume the roles of reporters or political analysts and write articles explaining reasons for the outcome of the election. Also have students include in their articles an analysis of how the election outcomes will affect the issues discussed in the campaign. When possible, have students use a word processor to write the articles. Encourage them to share their writing with others participating in the project by posting the articles on one of the computer networks.

Provide opportunities for students to read articles written by students in other schools and to critically review them in terms of clarity and accuracy. Select several of the articles from other schools and publish them either in the school newspaper or a local daily or weekly newspaper. An alternative to publishing articles in an existing publication is to create a special election newsletter. If an article from another school is used, send a copy of the publication to the contributing student.

The following questions should help students reflect on the election results:

- Do you see any patterns in the voting?
- Do you see regional differences in the election results for North Carolina?
- Do you see evidence of the influence of age, ethnicity, or wealth?

VoteLine '92 Calendar

September

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Act. 1: Media Research

Act. 1: Media Research

Act. 2: Demographic Analysis

VoteLine '92 Calendar

October

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
				1	2	3
				Act. 1: Media Research		
				Act. 2: Demographic Analysis		
4	5	6	7	8	9	10
	Act. 1: Media Research					
	Act. 2: Demographic Analysis					
	Act. 3: Demographic Spreadsheet					
11	12	13	14	15	16	17
	Act. 1: Media Research					
	Act. 4: Conduct Survey					
	Act. 5: Voter Registration					
18	19	20	21	22	23	24
	Act. 1: Media Research					
	Act. 4: Telecompute Survey Results *					
	Act. 5: Voter Registration					
25	26	27	28	29	30	31
	Retrieve Survey Results *	Act. 1: Media Research				
		Act. 4: Survey Spreadsheet				
		Act. 5: Voter Registration				

* Indicates events that must occur on the specific date.

VoteLine '92 Calendar

November

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
1	2	3	4	5	6	7
		Act. 6: Elections *	Act. 7: Post-Election Analysis			
			Act. 1: Media Research			
8	9	10	11	12	13	14
	Act. 7: Share Results					
	Act. 1: Media Research					
15	16	17	18	19	20	21
	Act. 7: Report Writing					
	Act. 1: Media Research					
22	23	24	25	26	27	28
29	30					

* Indicates events that must occur on the specific date.

OPINION SURVEY

Date: _____ **Teacher:** _____
School: _____ **Student:** _____

Questions	Approve	Disapprove	Weight
1. *Increase taxes to improve education*			
2. *Reduce defense spending in view of recent changes in Eastern Europe and the Soviet Union*			
3. *Larger federal expenditures for health care*			
4. *Increase federal taxes to decrease the federal deficit*			
5. *Create federal laws to limit foreign imports*			

For classroom calculations

	1	2	3	4	5
Number Approve:					
Number Disapprove:					
Percent Approve:					
Percent Disapprove:					
Average Weight:					

Materials

You will need the following equipment and software:

One or more student computer work stations. The computer(s) should be one of the following hardware/software configurations:

Apple IIe, IIc, or IIgs with printer and AppleWorks™ software version 2.0 or greater

Any MS-DOS computer with printer and Microsoft Works™ software version 2.0 or greater

Macintosh Plus, SE series, LC, or II series with printer and Microsoft Works™ software version 2.0 or greater

One telecomputing computer station:

The same type of computer used for the work stations but equipped with a modem, phone line, and telecomputing software

The VoteLine Diskette and Module IV Activity Guide will be available from The North Carolina Department of Public Instruction beginning August 1, 1992

Complete the form, cut here, and mail as indicated

VoteLine Order Form

Please copy the VoteLine Diskette in the format marked below on the blank double density diskette enclosed. (Enclose a separate diskette for each format needed)

Computer	Diskette Type	
Apple II	[ ] 3.5"	[ ] 5.25"
Macintosh	[ ] 3.5"	
MS-DOS	[ ] 3.5"	[ ] 5.25"

Please send me a copy of the VoteLine Module IV Activity Guide for the following telecomputing network(s).

FrEdMail	[ ]
Learning Link	[ ]

Name: _____
School System: _____
School: _____
_____
Address: _____
_____
_____
_____
Phone Number: _____

Mail this form to:

VoteLine
Computer Services
North Carolina Department of Public Instruction
116 West Edenton Street
Raleigh, North Carolina 27603-1712

Campaign Literature

Analyze campaign literature using the following form. Examine three distinct pieces of campaign literature for each candidate. Use a separate form for each piece of literature.

Title of Literature: _____

Appearance of the literature	Content: Which issues were mentioned?	Intended audience	Effectiveness

Newspaper Coverage

Analyze newspaper articles providing the information requested. Examine three distinct articles on the campaign. Use a separate form for each article.

Title of Article: _____

Name of paper	Indicate which section and the number of columns devoted to the article	Major points in the article	Give an assessment of the impact of the article on each candidate

Radio Ad Log

Report on a minimum of four advertisements, two for each candidate. Write a sentence or two in each column for each advertisement.

Network or station	Length in minutes and seconds	Message of commercial. Which issues were mentioned?	Who was the advertisement trying to reach?	Were the claims based on verifiable facts?

Radio Log

Report on a minimum of three radio news programs giving coverage to the election. After completing the first three columns, write one or two sentences in the final two columns describing the program.

Name of news program	Name of network or station	Length of coverage in minutes	Synopsis of coverage. Which issues were mentioned?	Objectivity: Was the coverage balanced and fair?

TV Ad Log

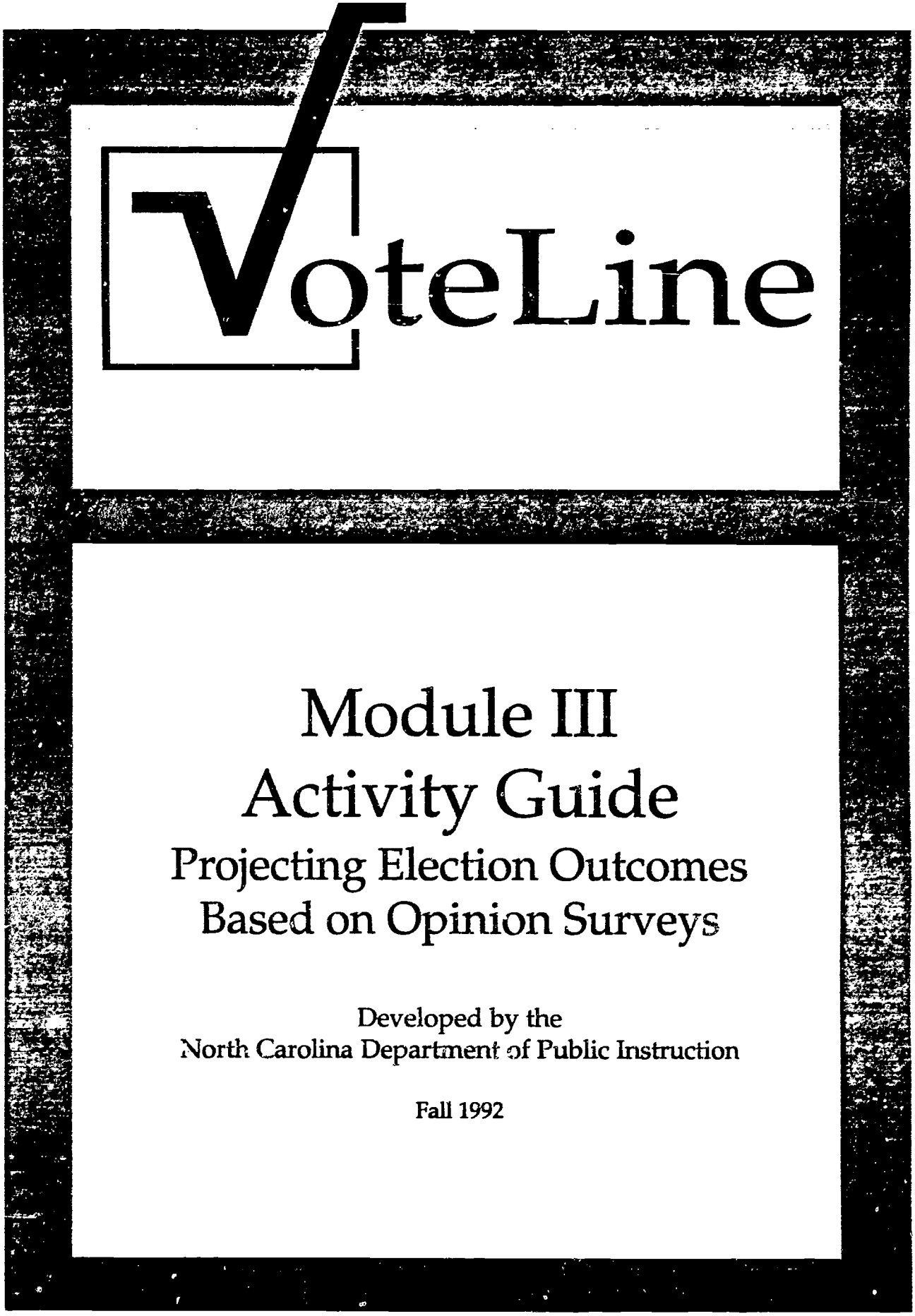
Write a sentence or two in each column for each advertisement. Report on a minimum of four advertisements, two for each candidate.

Network or station	Length in minutes and seconds	Message of commercial. Which issues were mentioned?	Who was the advertisement trying to reach?	Were the claims based on verifiable facts?

TV Viewing Log

Report on a minimum of three television news programs giving coverage to the election. After completing the first three columns, write one or two sentences in the final two columns describing the program.

Name of news program	Name of network or station	Length of coverage in minutes	Synopsis of coverage. Which issues were mentioned?	Objectivity: Was the coverage balanced and fair?



Module III
Activity Guide
Projecting Election Outcomes Based on Opinion Surveys

Developed by the
North Carolina Department of Public Instruction

Fall 1992

VoteLine Module III

Projecting Election Outcomes on Opinion Surveys

Contents

VoteLine Module III Activity Competency Goals

Social Studies

- The learner will acquire information from a variety of sources.
- The learner will use information for problem solving, decision making, and planning.
- The learner will demonstrate skill in self-management and social participation.
- The learner will participate effectively in civic affairs.

Computer Skills

- The learner will understand important issues of a technology-based society and will exhibit ethical behavior in of computer technology.
- The learner will demonstrate knowledge and skills in using computer technology.
- The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

Module III Overview

In this module, students will:

- research and discuss current issues in terms of how they affect the election process.
- design and conduct a survey asking participants to indicate their approval or disapproval of up to five statements. Ask respondents to rate the importance of each statement as to how much the issue will influence their voting decisions.
- publish the survey on a computer network with requests that other classes across the state or nation conduct the survey and transmit the results back by a specified date.
- enter the collected results into the VoteLine Module III Spreadsheet.
- conduct research on the candidates via print and electronic media to find evidence of their positions on the issues presented in the survey.
- discuss the research and come to a consensus on the positions of the candidates.
- code and enter the candidates' positions on each issue, as determined by the student decisions, into the VoteLine Module III Spreadsheet.
- use the VoteLine Module III Spreadsheet to calculate a projected outcome of the election.
- use the VoteLine Module III Spreadsheet to test "what if" scenarios.

Note: This activity can be conducted during non-election years. Students might select two national leaders to be opposing candidates or develop profiles of fictitious candidates.

The VoteLine Module III Spreadsheet

The computer spreadsheet used in this module will calculate projected percentages of votes received by each of two candidates in a real or fictitious election based on:

- survey results collected locally and electronically via computer networks.
- the importance of each issue as recorded in the survey.
- the positions of the candidates as researched by the students.

Note: The VoteLine software is not designed to scientifically predict exact election results.

VoteLine Module III Activities

Designing and Conducting a Survey Activity

In this activity, students will design and conduct an opinion survey to gain insights into how people feel about current issues. They may also conduct this survey across the state or nation.

> *Note: If you are using this module as part of the VoteLine '92 activities, a prepared survey is located on page 18 of the VoteLine '92 activity guide. Therefore, you will not need to design your own questions.*

Spend a class session discussing the issues that might be important to people as they vote. Issues should not be limited to those being discussed by the candidates; some of the issues that people care about often are not directly addressed by candidates. Make a list of issues as they are agreed upon by the class.

Once a final list has been established, divide the class into five small groups giving each group one or more issues to examine. Instruct the groups to develop a survey item for each issue. Each item should:

- be worded as a statement (not a question) so that participants in the survey can respond by either saying they approve or disapprove of the statement.
- address all aspects of the issue.
- be worded clearly to get accurate responses from the participants.

When each group has written their item, review and revise them as a class. If more than five items have been written, reach consensus on which five will be included in the survey.

Students should receive clear instructions on administering the survey. *(See Figure 1 for tips.)* It is suggested that each student survey a predetermined number of people. If each student in a class of 30 polls 5 people, that translates into a great deal of data. Members of smaller classes may each need to survey a larger number of people. Students can interview respondents by phone or in person.

Tips on Conducting the Survey

In surveying people, the students should:

- Explain what the survey is for --

  "This survey is to collect data for a social studies project on democracy, and the campaign and election process in the United States."

- Explain that the responses will be confidential and that their names will not be recorded.

- Explain that each statement will be read as many times as the respondent needs and that the respondent will be asked to indicate whether they "approve" or disapprove" of the statement.

- Explain that the respondent will also be asked to indicate how important the statement is as they decide who they will be voting for in the election --

  "How important is this statement to you in deciding who you will vote for in the (presidential) election. Use a scale of zero (0) to ten (10) where zero means not at all important and 10 means extremely important."

Figure 1

A blank survey form is included on page 18. It provides a place for the date, school name, teacher name, and student's name. *(See Figure 2.)* Below that it has five large boxes where you can write or type the five statements developed by the class. Once the date, teacher, school names, and the statements have been typed or written on the sheet, use this as a master for copying sheets for the students. Students should write their name in the space for student name on the survey form.

As students conduct the survey and begin using the sheets, they should place a check (√) in the appropriate "Approve" or "Disapprove" box for each respondent. Then they should enter the importance value (number) given by each respondent for each statement in the "Weight" box. Up to five people can be recorded for each question.

OPINION SURVEY

Date: *10/5/92* **Teacher:** *Doris Crabtree*
School: *Morningside High School* **Student:** *Henry Beam*

Statements	Approve	Disapprove	Weight
1. *Increase federal taxes to fund improvements in education.*	√		6
		√	3
	√		8
	√		9
	√		7

For classroom calculations

Statements	1	2	3	4	5
Number Participants:	5	5	5	5	5
Number Approve:	4	4	2	5	2
Number Disapprove:	1	1	3	0	3
Average Weight:	7	7	8	6	4

Figure 2

At the bottom of each survey sheet is a tallying section. Here, students should enter the number of participants, the number of people who approved, the number who disapproved, and the average (rounded to nearest whole number) importance weightings for each statement.

Publishing the Survey on a Computer Network (Optional)

In this activity, students will publish their survey on a computer network so that students across the state or nation might assist in conducting the poll.

Note: If you are using this module as part of ***VoteLine*** *'92, the prepared survey has already been sent to all project participants. Therefore, it will not be necessary to publish a survey to the computer networks.*

Guidelines for Writing a Call for Collaboration

Your message should have the following items:

- Explain the project that you are conducting and why it is important that other classes contribute. (Make other teachers feel that they are providing important information.)
- Promise to share the results of your study with all classes that contribute. Any time that you ask for contributions from distant classes, it is important to contribute something in return. This is only fair (and also increases the number of responses).
- Describe exactly what you want from the distant teacher; include samples and templates.
- Although, people can usually reply directly to the sender of a public message, it is a good idea to include your Email and postal addresses in your message. Some people might not know how to find your return address in the message header.

Figure 3

A guide for using **Learning Link** and **FrEdMail** in conjunction with the **VoteLine** project will be available from the North Carolina Department of Public Instruction on August 1, 1992. To receive a copy, complete the form on page 18 and mail to the indicated address with your request for the **VoteLine** diskette.

Most word processing programs can be used to write your electronic message. The most important feature is that you be able to save your message to disk as a **text** or **ASCII** file. Look at the user's guide for your word processing program for instructions on saving in text/ASCII format.

Use the word processing program to write your message. Figure 3 offers some tips on writing a "Call for Collaboration" message. Reread it, edit it and read it again. It is important to convey a sense of professionalism; misspelled words and mis-worded sentences can destroy that effect. Once the message is finished, print a copy for your records and save it to disk as a **text** or **ASCII** file.

Connect to the telecomputing service that you are using and post your message to the appropriate forum or bulletin board and logoff. After three or four days, begin checking your Email box for replies from other teachers. It might be a good idea to also check the bulletin board(s) or forum(s) that you sent the message to since some teachers might have mistakenly replied back to the bulletin board or forum rather than to your email address.

Finally, pick the responding sites (up to 12 including your own site) that provide a broad sample for entering into the VoteLine Module III Spreadsheet.

Sample electronic request:

Greetings computing educators,

My high school government class in Canton, North Carolina is conducting an election activity this year using computer spreadsheets. We're conducting a survey across North Carolina and using the spreadsheet program to project an election outcome based on the survey results. We also plan to project outcomes based on a variety of possible events that might effect voter opinions.

We're asking that classes across North Carolina help us by conducting the following survey and sending the results back to us. The survey involves five statements that can be responded to by approving or disapproving. We also want you to ask how important the statement is in determining who the respondant will be voting for. This can be answered on a scale of 0 to 10. The scale is explained in the survey. We'll be glad to share the results of our study with all classes who contribute to our project.

We will need the following statistics from you:

- Percent of people who approved of each statement.
- Percent of people who disapproved of each statement.
- Average number given for the imporantance of each statement

You can arrange the data like this:

	Approved	Disapproved	Average Importance	Participants
Q1	58%	42%	5	220
Q2	60%	40%	5.4	93
Q3	48%	52%	4.2	72
Q4	69%	31%	7.1	301

Send the statistics to:
LHARPER@SWAIN

---------- cut here ----------

Instructions: Place an "X" in the correct box indicating whether the person approves or disapproves of the statement. Write a number in the "Imp Num" box indicating the importance of the statement in deciding for whom to vote in the election. Use the following scale to determine this number.

Strongly Disapprove of Statement — No reason to approve or disapprove — Strongly Approve of Statement

0 1 2 3 4 5 6 7 8 9 10

	App	Disapp	Imp Num
1. Statement number 1	[ ]	[ ]	[ ]
2. Statement number 2	[ ]	[ ]	[ ]
3. Statement number 3	[ ]	[ ]	[ ]
4. Statement number 4	[ ]	[ ]	[ ]
5. Statement number 5	[ ]	[ ]	[ ]

---------- cut here ----------

Thank you very much for considering this request.

Logan Harper
Morningside High School
Canton, North Carolina

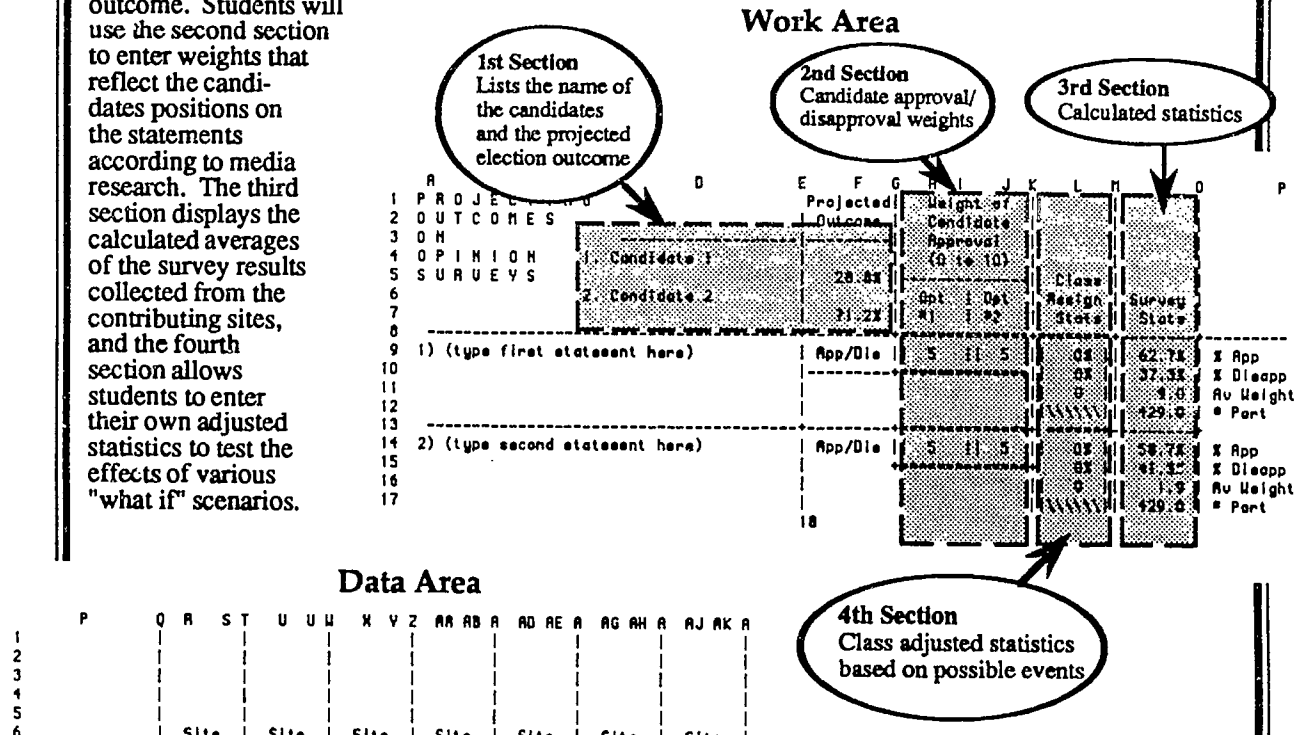
Figure 4

Projecting Election Outcomes Activity

In this activity, students will enter their survey results as well as coded decisions about the candidates' positions into the VoteLine Module III Spreadsheet. They will then use the spreadsheet to calculate projected election outcomes. In addition, students will use the spreadsheet to examine the effects of possible events on the election.

The Module III Spreadsheet

You will be using two different portions of the VoteLine Module III Spreadsheet. The **work area** portion of the VoteLine Module III Spreadsheet appears on the screen when you load the file. It is divided into four sections. The first, in the upper left part of the screen, simply lists the names of the candidates and the projected election outcome. Students will use the second section to enter weights that reflect the candidates positions on the statements according to media research. The third section displays the calculated averages of the survey results collected from the contributing sites, and the fourth section allows students to enter their own adjusted statistics to test the effects of various "what if" scenarios.



The **data area** where you'll enter the survey results from sites that contribute to the project is located to the right of the work area. For each site, you enter the percentage of those who participated in the surveys who approved of each statement, the percentage who disapproved, the average importance rating, and the number of participants.

Figure 5

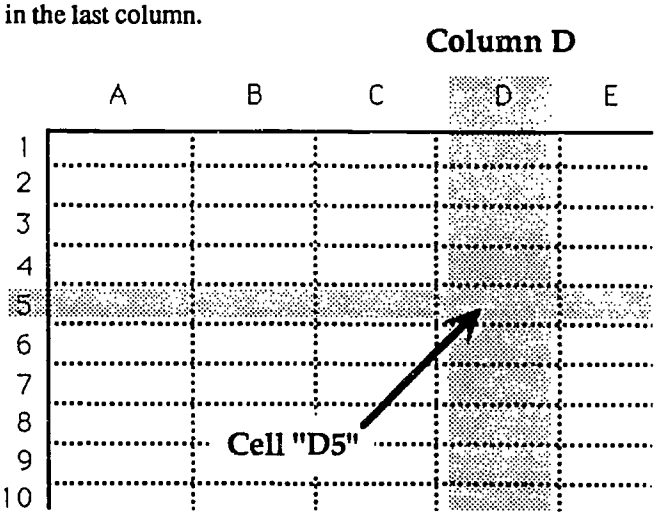
Entering Candidate Names into the VoteLine Module III Spreadsheet

Before using the **work area** *(see Figure 5)* portion of the VoteLine Module III Spreadsheet, students will type the names of the two candidates who are running for office. This information will be entered into cells D4 and D6 where "Candidate 1" and

About Computer Spreadsheets

A computer spreadsheet program arranges data into columns and rows on the computer screen. An example of a paper version of a spreadsheet is a budget. Another — somewhat more complex — example is a gradebook. Usually the student names are entered in a column on the left of the gradebook page with grades entered in the columns to the right. Each row holds the name and grades for one specific student. In a gradebook, the teacher calculates the grading period averages and enters them in the last column.

A computer spreadsheet divides the computer screen into columns and rows (columns going from the top to the bottom of the screen, and rows from left to right). On a computer spreadsheet, columns are usually identified by letters. The first column on the left is the "A" column, the next one is the "B" column and so on. Rows are identified by numbers. The first row at the top is row "1", the next one is row "2", etc. An individual cell — where each piece of information can be entered — is identified by the letter of the column it is in and the number of its row. Then, if some information has been entered in a cell that is in column "D" and row "5", it is in cell "D5".



Most computer spreadsheets allow the user to select a specific cell for entering or editing data by moving the highlighter to that cell. The highlighter is usually moved around on the screen by pressing the arrow keys. Pressing the down arrow key moves the highlighter down one cell, the up arrow key moves it up one cell, and the left and right arrow keys move the highlighter to the left or right one cell. If the computer has a mouse, then the highlighter can be moved by simply clicking on the cell you want to move it to. With many computer spreadsheets, entire blocks of cells can be highlighted.

Most computer spreadsheets are much larger than a single computer screen. As you move the highlighter to the right side of the screen, the spreadsheet itself begins to scroll to the left, revealing new columns as they move across the screen. Moving the highlighter down to the bottom will cause the spreadsheet to start scrolling up, revealing new rows.

What makes computer spreadsheets more powerful than the paper versions is the fact that formulas instructing the computer to perform either simple or complex calculations can be entered into cells. The computer displays the answer of the calculations in the cell that the formula was entered into. If a teacher had a computer spreadsheet gradebook, there might be a formula at the end of each student's row that instructs the computer to calculate the average of all of the grades in that row. Each time the teacher entered a new grade, the formula would re-calculate and display the new average grade.

In addition to this, spreadsheet users can test "what if" scenarios. The user of a budget spreadsheet might ask, "what if I change this cost?". By entering the new value and having the spreadsheet re-calculate the budget, the user can view the results. This ability to test "what if" scenarios makes computer spreadsheets very useful tools for people who make important decisions based on information.

<u>Some points to discuss:</u>

Identify some other paper spreadsheets and the benefits of having them on a computer?

List examples of other ways that spreadsheets might be used to test "what if" scenarios?

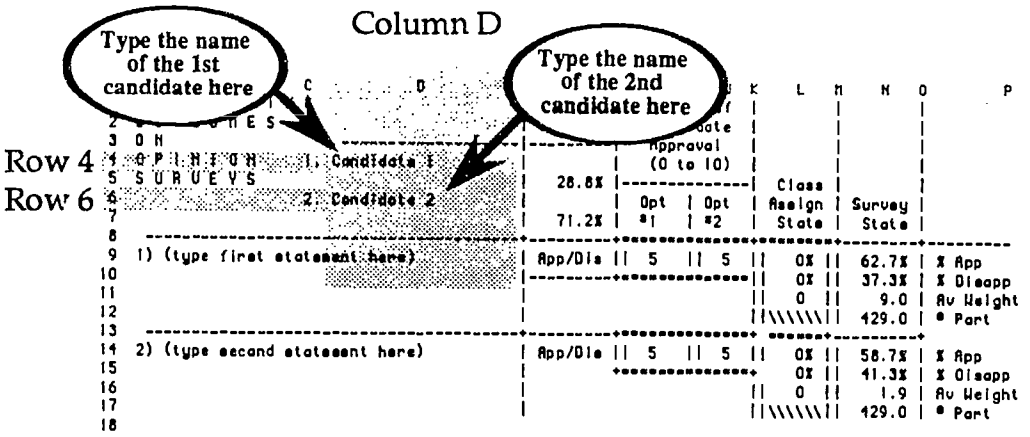


Figure 6

"Candidate 2" are currently located. *(See Figure 6.)* Use the arrow keys or the mouse to move the highlighter to the appropriate cells and enter the names of two candidates.

Entering Survey Statements into the VoteLine VoteLine Module III Spreadsheet

After entering the candidate names, your students will type the statements from the survey into the VoteLine Module III Spreadsheet. These should be entered into the five blocks in column B. Begin a new statement in rows 9, 14, 19, 24, and 29. Four lines are provided for each statement. *(See Figure 7.)*

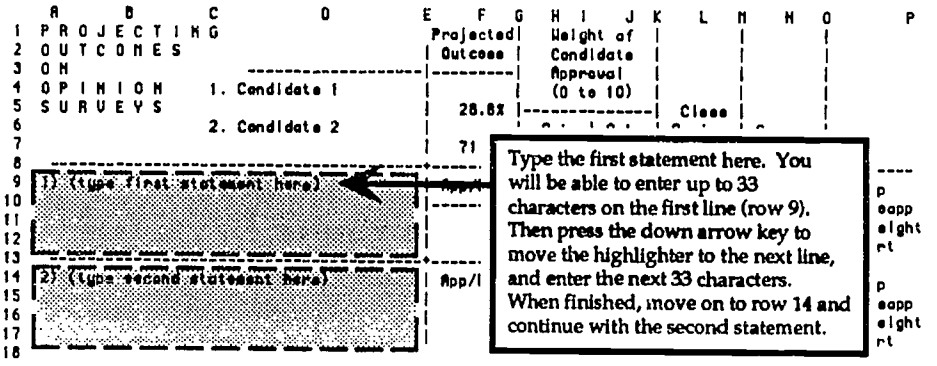


Figure 7

To enter the first statement, use the arrow keys or mouse to move the highlighter to cell B9. Begin typing the first statement (up to 33 characters). If you are in the middle of a word at 33 characters, then back up and hyphenate where appropriate, or back up to the beginning of that word and press RETURN or ENTER. Move the highlighter to the second line (row 10) and enter the next part of the statement up to 33 characters. You have four lines in which to enter each statement. When the first statement is finished, go to cell B14 and enter the second statement in the same way that you entered the first one. Continue in the same manner for the other statements.

Entering Survey Results into the VoteLine Module III Spreadsheet

Use the arrow keys or mouse to shift the spreadsheet on the screen so that cell P1 is in the upper left hand corner of the screen. *(See Figure 8.)* This is the data area of the VoteLine Module III Spreadsheet. Next, move the highlighter so that it is on cell R9. Type the percent (as a whole number...45 for 45%) of participants at site 1 (your site) who approved of the first statement. Then press the down arrow key to move the highlighter to cell R10 and type the percent of participants who disapproved of the first statement. Move the highlighter down again to enter the average importance weight in cell R11 and again to enter the number of participants in R12. Next, move on down to R14 and enter the same data for statement 2 and so on. When the data for site 1 has been entered for all statements, use the arrow keys or mouse to move the highlighter to cell U9 and begin entering the data for the second site. You will have enough columns for 12 sites. After you have entered the collected data from all sites, you can move back to the work area of the spreadsheet by using the arrow keys or mouse.

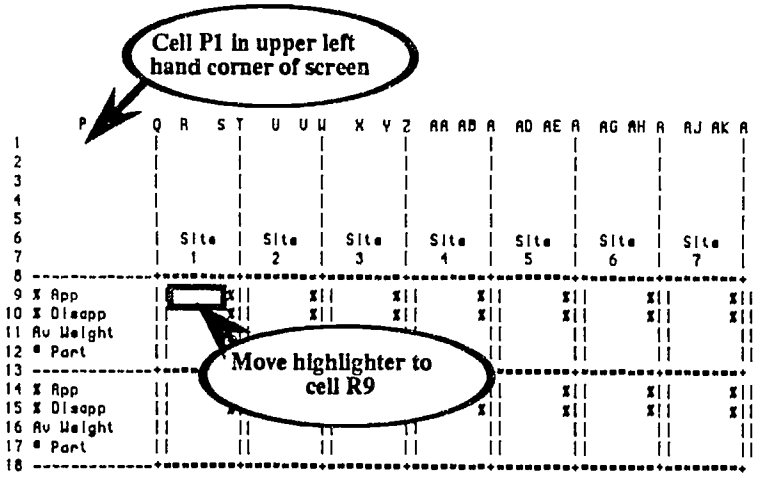


Figure 8

Determining and Coding the Candidates' Positions

While conducting the survey and waiting for results, students should continue searching the media for evidence of the candidates' positions on issues addressed by the survey statements. Students should also spend some time discussing what they have learned about the candidates in relation to other issues in order to conclude what the candidates' positions on the issues are.

In order to put their conclusions in the computer spreadsheet, students must code them, or express them in a way that the spreadsheet can use in its calculations. Therefore, a weighting scale has been developed that allows students to record their decisions as numbers. These weight numbers can range from 0 to 10, where 0 means the candidate would "strongly disapprove of the statement," while 10 means he or she would "strongly approve of the statement." The number 5 means that there is no evidence of approval or disapproval of the statement. *(See Figure 9.)*

CANDIDATE'S POSITION WEIGHTING

Strongly disapprove of statement	No evidence of approval or disapproval	Strongly approve of statement

0 1 2 3 4 5 6 7 8 9 10

Figure 9

A weighting worksheet has been included on page 17 to help students in making these decisions. The worksheet provides a place to type or write each survey statement and boxes to the right of each statement for students to write the position weights. The

Survey Statements	Cand. A	Cand. B	Survey Results Class Assigned Stats.	
1. *Increase federal taxes to improve education.*	H9	J9	L9	Percent Approval
Justification:			L10	Percent Disapproval
			L11	Importance Weighting
2. *Reduce defense spending in view of recent changes in Eastern Europe and the Soviet Union.*	H14	J14	L14	Percent Approval
Justification:			L15	Percent Disapproval

Figure 10

weight for candidate A should be placed in the box under "Cand. A," and the weight for candidate B under "Cand. B." There is also room beneath each statement for students to write justifications of their weights. *(See Figure 10.)* The "Survey Results" column should not be filled until the activity on possible events on page 13.

At the bottom of the worksheet, the students are asked to predict the winner of the election based on their research and discussions. *(See Figure 11.)* They will fill in blanks and circle the best option in parentheses so that it reads that "(*Candidate*) will defeat (*Candidate*) by a (wide or narrow) margin." This prediction should be based on the students' perception of each candidate's position and the opinions of survey participants. This information will be used later in the debriefing activity.

Student prediction on election outcome prior to computer calculations:

_____ **will defeat** _____ **by a (wide, narrow) margin**

Computer Projected Outcome	**Comments and Discrepancies:**
Candidate 1 _____ % ___	
Candidate 1 _____ % ___	

Figure 11

Entering Candidates' Position Weightings into the VoteLine Module III Spreadsheet

After determining the candidates' position weightings, your students will type this information into the spreadsheet (as recorded on the worksheet). The worksheet has the cell locations printed in the lower right hand corner of each information box to show students where they should enter the information into the spreadsheet.

Begin by using the arrow keys or mouse to move the highlighter to cell H9. *(See Figure 12.)* Here you will enter the position weight number of candidate 1 for statement 1. Then go to the right to cell J9 and enter the position weight number of candidate 2 for statement 1. Continue entering the remaining position weights in the same way.

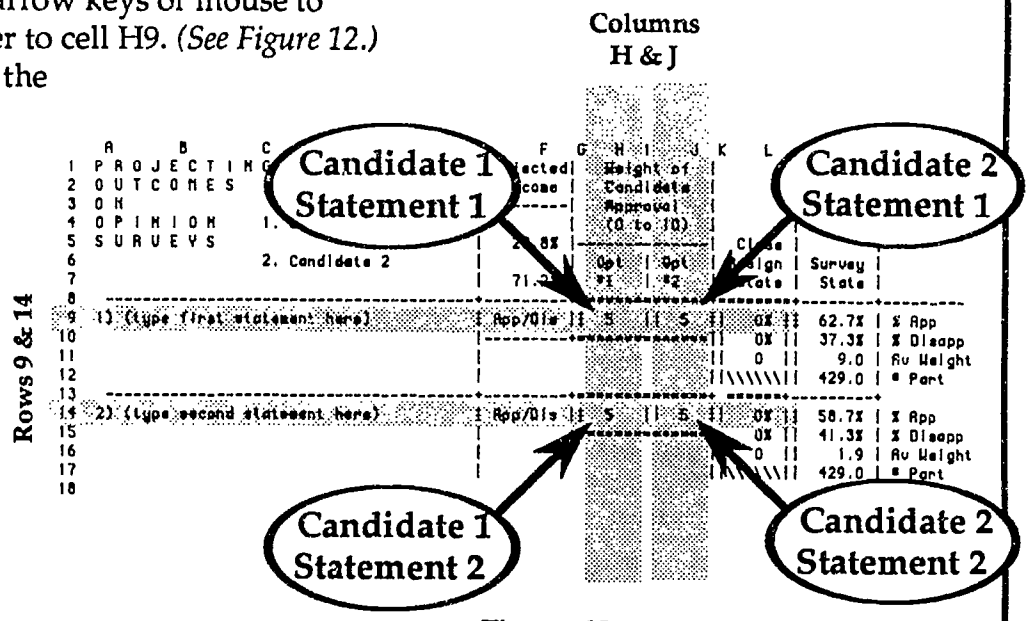


Figure 12

Running the Calculations

After the data has been entered into the spreadsheet, the spreadsheet can be used to calculate the projected election outcome. Normally, computer spreadsheets automatically re-calculate all formulas each time a cell is edited. This spreadsheet, however, has been set up for manual calculation which means that you must tell it when to perform its calculations. The method for running calculations depends on the computer and software you are using. *(See Figure 13 for instructions.)*

Running Calculations

AppleWorks™ Apple II
Hold down the <Open-Apple> key and tap the letter "K"

Microsoft Works™ Macintosh
Hold down the <Command> key and tap "="

Microsoft Works™ MS-DOS
Press <F9>

Figure 13

Keep an eye on cells F5 and F7 as you have the spreadsheet perform the calculations. After a moment these values will change, revealing the projected outcome to the election as the percentage of votes for each candidate.

Debriefing on the Outcomes

After the spreadsheet has made its calculations, the groups should discuss outcomes in terms of any discrepancies between their predictions and the spreadsheet's projected outcome. The weighting worksheet provides a place for entering the spreadsheets projected outcome beneath the students' earlier prediction, as well as room to write any comments about the discrepancies.

This is an important phase of the activity. Students should evaluate their earlier decisions and fine tune their thinking about the issues and their impact on the election. Some assistance by the teacher may be necessary to make the most of this activity.

Projecting the Election Outcome Based on Possible Events

Students have an opportunity, with the VoteLine Module III Spreadsheet, to edit survey results and candidate position weightings to test "what if" scenarios. You may want to discuss with the class how certain events can and have affected elections. The Iranian hostage situation and its effect on the Carter/Reagan presidential campaign is a good example.

During this discussion, ask the class to suggest a number of possible events that might affect the election. Write these events on the board and ask the class how the event might change people's views on one or more of the statements in the survey. Some possible scenarios might be:

- Statistics released by Educational Testing Service, Princeton, New Jersey, indicate a sharp drop in test scores on basic skills for elementary students nationwide.
- Armed conflict breaks out involving United States troops and we are involved in what appears to be a war that will last at least 3 years.
- The North Carolina Department of Human Resources announces a sharp rise in infant mortality rates in the state.
- A paroled murderer is arrested as a prime suspect in a series of brutal killings.
- A key vote before the Senate on presenting a Constitutional amendment to limit symbolic speech to the state legislature passes.
- The projected federal deficit grows dramatically due to congressional actions which involve the override of several presidential vetos.
- Two new hazardous waste sites are discovered that are an immediate threat to public health.
- It is revealed that campaign contributions for the Republican candidate totals more from big business than from private citizens.

- Congress passes an increase in income taxes that are designed to collect more from the rich.
- A government accounting office report indicates that North Carolina ranks lowest in funds received per capita for federal programs.
- The closing of a North Carolina military base is announced as a cost-cutting measure by the current administration.

Divide the class into groups (a group for each scenario) and assign each group one of the scenarios on which to base their computer projections. The groups should:

- discuss further the implications of their event in terms of defense, economics, society, etc.
- decide first how the event might change the results of the survey and the importance weighting of each statement.
- decide how the candidates' positions on the statements might change. Students should take into consideration the histories of the candidates — have they exhibited a willingness to change their positions in the past when faced with new situations.

The groups should use the **Survey Decision Coding Worksheet** on page 17 to record their coded decisions. Space is provided to enter new candidate position weightings, survey results and importance weightings for each statement. The groups should also write justifications for each statement for which they change data, explaining why they made the changes. After the worksheet has been completed, the groups should enter their changes into the VoteLine Module III Spreadsheet. In each box on the scenario testing worksheet the cell location where the data should be entered in the VoteLine Module III Spreadsheet has been printed. The candidate position weightings will be entered in the same cells that they were placed before. *(See Figure 14.)* The new survey

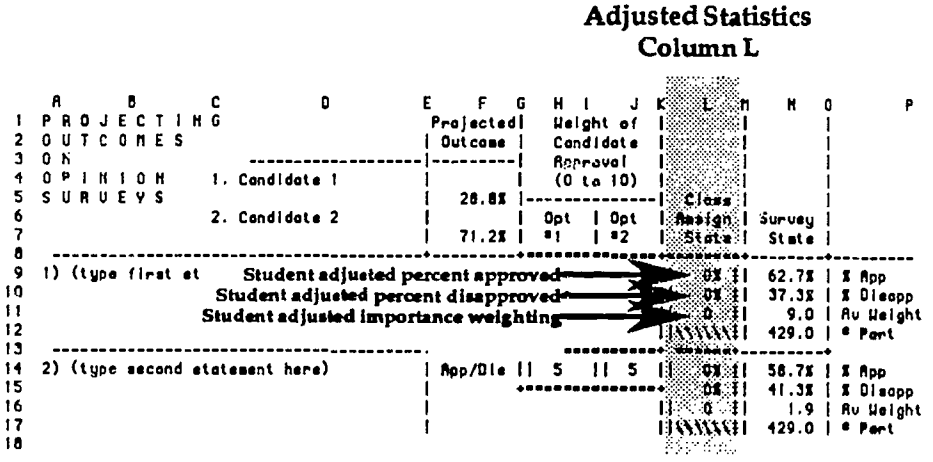


Figure 14

statistics (percent approved, percent disapproved, and importance weighting) will be entered in column L beside the computer calculated averages.

When students enter their own adjusted survey results and importance weighting for any statement, the spreadsheet factors in those adjusted statistics for that statement rather than the previously entered survey statistics. On statements where students do not make changes, the survey statistics will still be used.

After the groups have entered their new data into the spreadsheet based on their conclusions about the possible scenario, they will want to re-calculate the projected outcome of the election. Once again, this will depend on the computer and software being used. *(See the box on page 12.)*

VoteLine Module III Debriefing Activity

This activity, students will discuss their experience with the preceding Module III activities in order to gain further insights into group working, the problem solving process, and the use of computers in politics.

Discuss the following questions at the conclusion of the survey based spreadsheet activities:

- What are the benefits of working in groups and what are some difficulties? How can the difficulties be overcome?
- How might the use of computer spreadsheets change the way that political campaigns are run?
- Who would benefit most from using computer spreadsheets to project election outcomes?
- Are there any dangers in using computers to project election outcomes? If so, explain.

OPINION SURVEY

Date: _____ **Teacher:** _____
School: _____ **Student:** _____

Questions	Approve	Disapprove	Weight
1.			
2.			
3.			
4.			
5.			

For classroom calculations

	1	2	3	4	5
Number Approve:					
Number Disapprove:					
Percent Approve:					
Percent Disapprove:					
Average Weight:					

Survey Decision Coding Worksheet

Write two weights for each survey statement, one for each candidate. The weights should be numbers between 0 and 10 where 0 mea the candidate would "strongly disapprove of the statement," and 10 means "strongly approve of the statement." The "Survey Results" columns are to be completed during the activity on possible events on page 13.

Survey Statements	Cand. A	Cand. B	Survey Results Class Assigned Stats.	
1. Justification:	H9	J9	L9	Percent Approval
			L10	Percent Disapproval
			L11	Importance Weighting
2. Justification:	H14	J14	L14	Percent Approval
			L15	Percent Disapproval
			L16	Importance Weighting
3. Justification:	H19	J19	L19	Percent Approval
			L20	Percent Disapproval
			L21	Importance Weighting
4. Justification:	H24	J24	L24	Percent Approval
			L25	Percent Disapproval
			L26	Importance Weighting
5. Justification:	H29	J29	L29	Percent Approval
			L30	Percent Disapproval
			L31	Importance Weighting

Student prediction on election outcome prior to computer calculations:

_____ wi ! defeat _____ by a (wide, narrow) margin

Computer Projected Outcome

Candidate 1

_____ % ___

Candidate 1

_____ % ___

Comments and Discrepancies:

Materials

You will need the following equipment and software:

One or more student computer work stations. The computer(s) should be one of the following hardware/software configurations:

Apple IIe, IIc, or IIgs with printer and AppleWorks™ software version 2.0 or greater

Any MS-DOS computer with printer and Microsoft Works™ software version 2.0 or greater

Macintosh Plus, SE series, LC, or II series with printer and Microsoft Works™ software version 2.0 or greater

One telecomputing computer station:

The same type of computer used for the work stations but equipped with a modem, phone line, and telecomputing software

---

The VoteLine Diskette and Module IV Activity Guide will be available from The North Carolina Department of Public Instruction beginning August 1, 1992

Complete the form, cut here, and mail as indicated

VoteLine Order Form

Please copy the VoteLine Diskette in the format marked below on the blank double density diskette enclosed. (Enclose a separate diskette for each format needed)

Computer	Diskette Type	
Apple II	[ ] 3.5"	[ ] 5.25"
Macintosh	[ ] 3.5"	
MS-DOS	[ ] 3.5"	[ ] 5.25"

Please send me a copy of the VoteLine Module IV Activity Guide for the following telecomputing network(s).

FrEdMail	[ ]
Learning Link	[ ]

Name: _____
School System: _____
School: _____
_____
Address: _____
_____
_____
_____
Phone Number: _____

Mail this form to:

VoteLine
Computer Services
North Carolina Department of Public Instruction
116 West Edenton Street
Raleigh, North Carolina 27603-1712

VoteLine

Module II
Activity Guide
Projecting Election Outcomes Based on State Demographics

Developed by the
North Carolina Department of Public Instruction

Fall 1992

NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION BOB ETHERIDGE, STATE SUPERINTENDENT

VoteLine Module II

Projecting Election Outcomes Based on State Demographics

Contents

VoteLine Module II Activity Competency Goals

Social Studies

- The learner will acquire information from a variety of sources.
- The learner will use information for problem solving, decision making, and planning.
- The learner will demonstrate skill in self-management and social participation.
- The learner will participate effectively in civic affairs.

Computer Skills

- The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.
- The learner will demonstrate knowledge and skills in using computer technology.
- The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply, and communicate information.

Module II Overview

In this module, students will:

- conduct research on the issues looking at both print and electronic media; examine the mass media to determine the candidates' positions on a variety of issues.
- discuss the relationships between the issues and demographic categories (e.g. population density, education level); answer questions, such as "How might high population density counties be affected by extended unemployment benefits as opposed to rural counties?"
- enter conclusions into the VoteLine Module II Spreadsheet.
- use the VoteLine Module II Spreadsheet to calculate a projected outcome of an election.
- use the VoteLine Module II Spreadsheet to test "what if" scenarios.

Note: This activity can be conducted during non-election years. Students can select two national leaders as opposing candidates or develop profiles of fictitious candidates.

The VoteLine Module II Spreadsheets

The computer spreadsheets used in this module will calculate projected percentages of votes received by each of two candidates in a real or fictitious election based on:

- the relationship of the issues, the candidates, and demographic characteristics of North Carolina.
- the degree to which those relationships, as determined by student decisions, apply to the election.
- the population of each county in North Carolina.

This module uses four separate spreadsheets. There is one each for the three regions of North Carolina: Mountain, Piedmont, and Coastal; and a state-wide spreadsheet. The Module II activities may be conducted using the spreadsheets for your region or the state-wide spreadsheet. **In this activity guide the words "VoteLine Module II Spreadsheet" will refer to the specific spreadsheet(s) selected.** *(The Apple II version of the state-wide spreadsheet requires an Apple IIgs or an Apple IIe with 512K of memory.)*

*Note: The **VoteLine** software is not designed to scientifically predict exact election results.*

VoteLine Module II Activities

Research and Discussion Activity

In this activity, students will acquire information about the issues, candidates, and the electorate from a variety of print and electronic media. Utilizing cooperative learning techniques, they will share and discuss the information they have collected and make conclusions based on the information.

> *Note: If you are using this module as part of* ***VoteLine*** *'92, you may skip this activity since it is the same as Activity 1 in the* ***VoteLine*** *'92 guide.*

Spend a class session discussing the issues that are probably on voters' minds during the campaign. Issues should not be limited to those being discussed by the candidates; some of the issues that are important to people are often not addressed directly by candidates. Make a list of issues as they are agreed upon by the class.

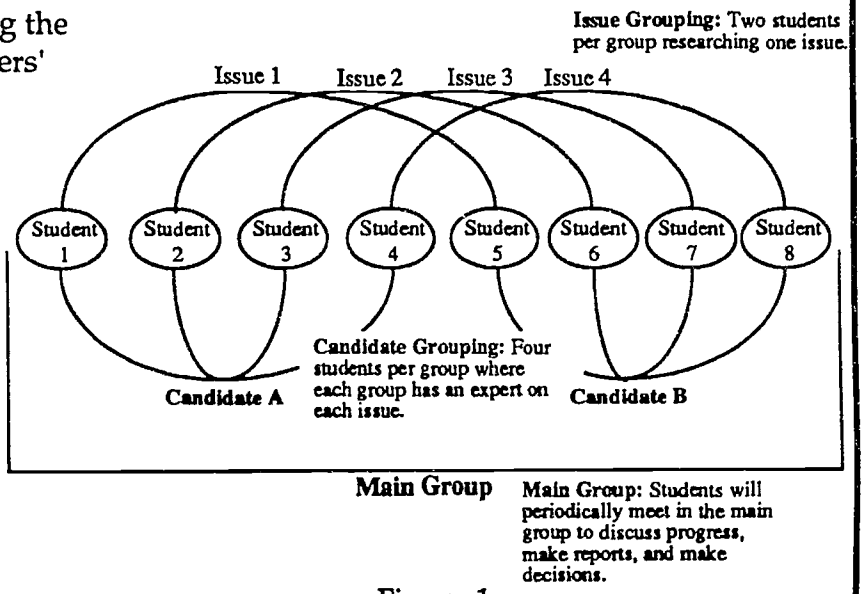


Figure 1

Issues Grouping

Divide the class into groups of eight students and ask them to come to consensus on the four most important issues. When consensus has been reached, students should work in pairs, with each pair responsible for researching one of the issues. *(See Figure 1.)* Opportunities for research should be scheduled periodically throughout the project with agreed-upon deadlines, and students will present reports to their main group. Potential sources of information are newspapers and magazines, reference books, CD-ROM and on-line indexes and databases, and cable/radio/television news broadcasts.

Candidate Grouping

The groups should also be divided into subgroups of four students, with each subgroup responsible for researching one of the candidates. *(See Figure 1.)* This grouping should be arranged so that each candidate group has one expert on each issue from the issue grouping. *(The grouping scheme can be altered depending on class size and other considerations.)* Sources of information for these subgroups can be campaign literature, newspaper and other print media coverage, radio and television advertising, and radio and television news broadcasts.

After each group has given its first report, spend a class period discussing how each issue might impact the following demographic categories:

Population	High population vs. low population
Population Density	High population density vs. low population density
Age	High percent of population under 25 vs. high percent of population over 65
Population growth	High population growth vs. low population growth
Per Capita Income	High per capita income vs. low per capita income
Education Level *(average grade completed)*	High education level vs. low education level
Political Parties	High population of democrats vs. high population of republicans.

Decision Making and Coding

In this activity, students will use what they have learned from research and discussions to make decisions about the relationships between demographics and the positions of the candidates. They will also code their decisions for entry into the VoteLine Module II Spreadsheet.

After discussing the issues and demographics as a class, students should meet in their main group again to conclude about how counties in North Carolina might vote based on their demographic characteristics. The **Demographic Decision Coding Worksheet** is included on pages 11and 12. It has questions that will assist you in determining how counties might vote in an election. *(See Figure 2.)*

Prompting Questions	Cand. A	Cand. B
1. How much will counties with high populations approve of each candidate? **Justification:**	G9	I9
2. How much will counties with high population densities approve of each candidate? **Justification:**	G10	I10

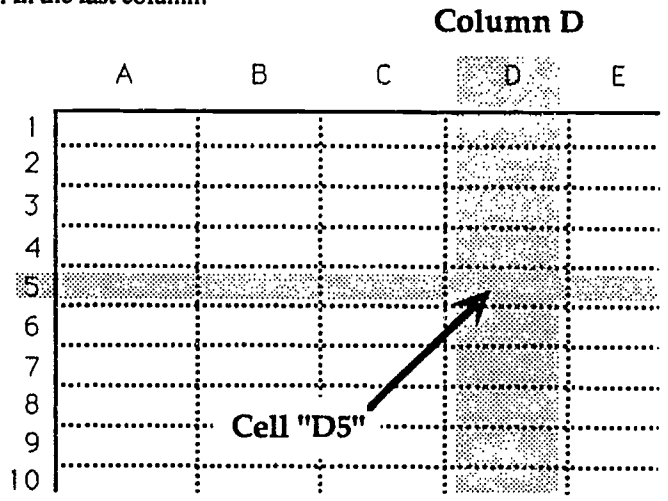
Figure 2

In order to enter their conclusions into the VoteLine Module II Spreadsheet, students must code them, or express them in a way that the spreadsheet can use in its calculations. Therefore, a weighting scale has been developed that allows students to answer

About Computer Spreadsheets

A computer spreadsheet program arranges data into columns and rows on the computer screen. An example of a paper version of a spreadsheet is a budget. Another — somewhat more complex — example is a gradebook. Usually the student names are entered in a column on the left of the gradebook page with grades entered in the columns to the right. Each row holds the name and grades for one specific student. In a gradebook, the teacher calculates the grading period averages and enters them in the last column.

A computer spreadsheet divides the computer screen into columns and rows (columns going from the top to the bottom of the screen, and rows from left to right). On a computer spreadsheet, columns are usually identified by letters. The first column on the left is the "A" column, the next one is the "B" column and so on. Rows are identified by numbers. The first row at the top is row "1", the next one is row "2", etc. An individual cell — where each piece of information can be entered — is identified by the letter of the column it is in and the number of its row. Then, if some information has been entered in a cell that is in column "D" and row "5", it is in cell "D5".



Most computer spreadsheets allow the user to select a specific cell for entering or editing data by moving the highlighter to that cell. The highlighter is usually moved around on the screen by pressing the arrow keys. Pressing the down arrow key moves the highlighter down one cell, the up arrow key moves it up one cell, and the left and right arrow keys move the highlighter to the left or right one cell. If the computer has a mouse, then the highlighter can be moved by simply clicking on the cell you want to move it to. With many computer spreadsheets, entire blocks of cells can be highlighted.

Most computer spreadsheets are much larger than a single computer screen. As you move the highlighter to the right side of the screen, the spreadsheet itself begins to scroll to the left, revealing new columns as they move across the screen. Moving the highlighter down to the bottom will cause the spreadsheet to start scrolling up, revealing new rows.

What makes computer spreadsheets more powerful than the paper versions is the fact that formulas instructing the computer to perform either simple or complex calculations can be entered into cells. The computer displays the answer of the calculations in the cell that the formula was entered into. If a teacher had a computer spreadsheet gradebook, there might be a formula at the end of each student's row that instructs the computer to calculate the average of all of the grades in that row. Each time the teacher entered a new grade, the formula would re-calculate and display the new average grade.

In addition to this, spreadsheet users can test "what if" scenarios. The user of a budget spreadsheet might ask, "what if I change this cost?". By entering the new value and having the spreadsheet re-calculate the budget, the user can view the results. This ability to test "what if" scenarios makes computer spreadsheets very useful tools for people who make important decisions based on information.

Some points to discuss:

Identify some other paper spreadsheets and the benefits of having them on a computer?

List examples of other ways that spreadsheets might be used to test "what if" scenarios?

5

questions with numbers that can be entered into the spreadsheet. These weight numbers range from 0 to 10, where 0 means "strongly disapprove of the candidate," while 10 means "strongly approve of the candidate." The number 5 means "no reason to approve or disapprove." The scale in Figure 3 can serve as a guide for students:

Strongly disapprove of candidate				No reason to approve or disapprove					Strongly approve of candidate	
0	1	2	3	4	5	6	7	8	9	10

Figure 3

At the end of the worksheet, the students are asked to predict the winner of the election based on their research and discussions. They should follow this with a brief explanation for their decision. This information will be useful later in the debriefing activity.

Projecting Election Outcomes

In this activity, students will enter their decisions into the VoteLine Module II Spreadsheet and use the spreadsheet to calculate projected election outcomes. Students will also use the VoteLine Module II Spreadsheet to examine the effects of possible events on the election.

Overview of the spreadsheet

The work area of the Module II Spreadsheet is divided into three basic parts. *(See Figure 4.)* The first, in the upper part of the screen, simply lists the names of the candidates. Students will enter the name of the candidate for the current election. This portion of the work area will also display the projected outcomes of the election. The second section, located in the lower left hand corner, is the largest and lists the demographic categories (e.g., "Counties with a Large Population", "Counties with High Population Densities", etc.). The third section, in the lower

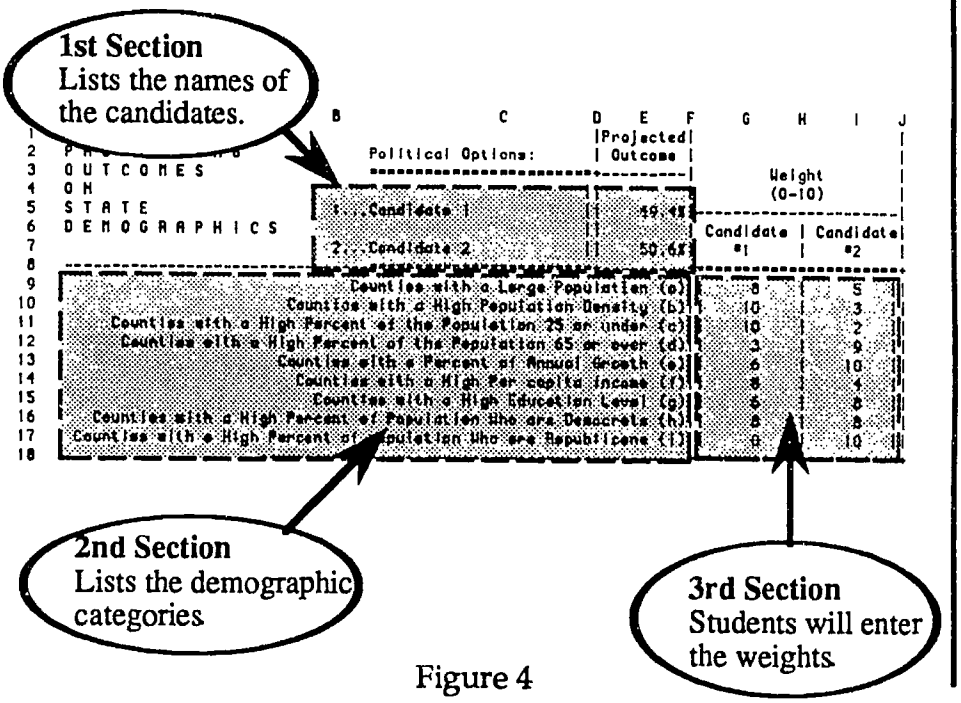


Figure 4

right hand corner, consists of two columns of nine cells where students will enter the weights that they have decided on.

Note: A handout master about computer spreadsheets has been provided on page 5. Make enough copies for your class and spend some time discussing each item.

Entering Candidate Names into the VoteLine Module I Spreadsheet

Before entering the weights, students will type the names of the two candidates who are running for office. This information will be entered into cells C5 and C7. *(See Figure 5).* Use the arrow keys or mouse to move the highlighter to cell C5 and type in the name of the first candidate. Next, move the highlighter to cell C7 and type the name of the second candidate.

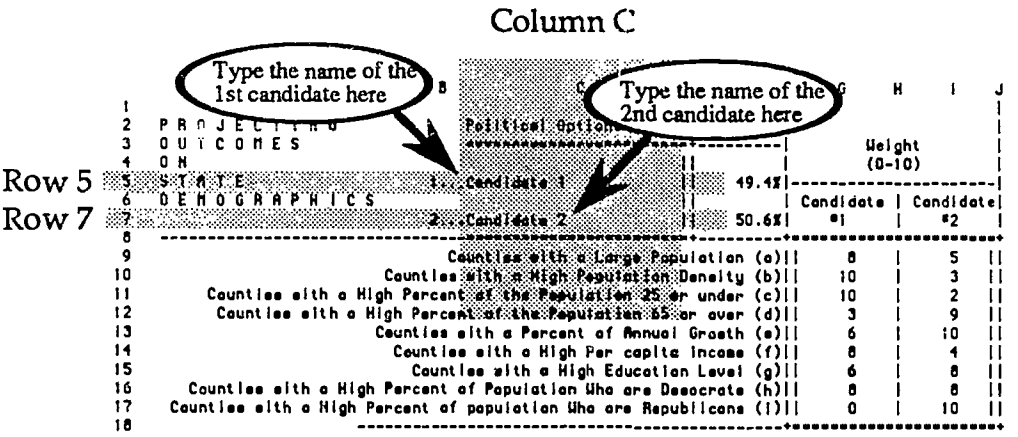


Figure 5

Entering Weights into the VoteLine Module II Spreadsheet

The weights that the students wrote on the worksheet will be entered in columns G and I, from rows 9 through 17. *(See Figure 6.)* Each box provided on the worksheet for weight numbers also has the spreadsheet cell location printed in the lower right hand corner to help students know where to enter the weights into the

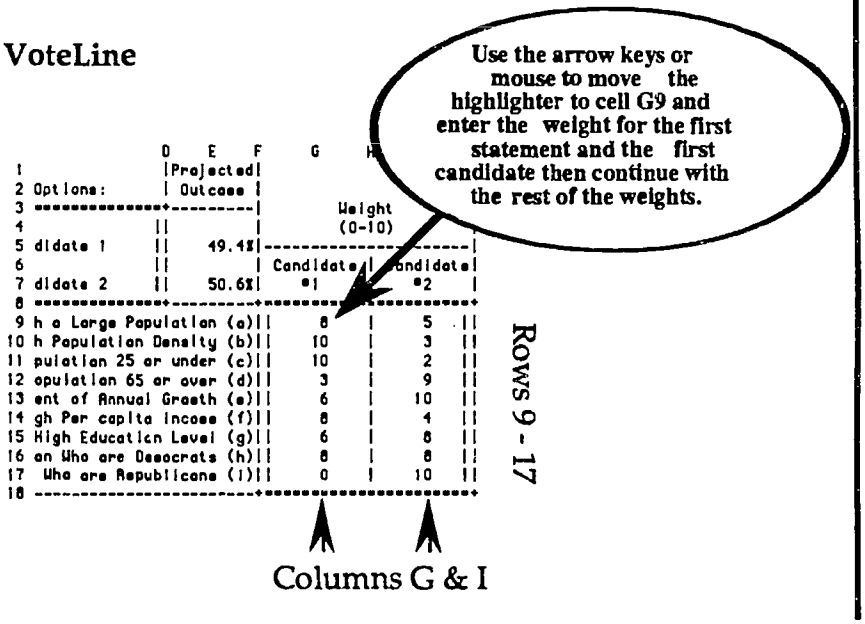


Figure 6

spreadsheet. To enter the first weight, use the arrow keys or the mouse to move the highlighter to cell G9. At this point, the student will type the weight for the first question and candidate A from the worksheet. Follow this process for the remaining weights.

Running the Calculations

After the names of the candidates and the weights have been entered into the spreadsheet, students can use the spreadsheet to calculate the projected winner of the election. Usually, computer spreadsheets automatically re-calculate all formulas each time a cell is edited; but this spreadsheet has been set up for manual calculation, which means that you must tell it when to perform its calculations. The method for this depends on the computer and software you are using. *(See Figure 7 for instructions.)*

Running Calculations

AppleWorks™ Apple II
Hold down the <Open-Apple> key and tap the letter "K". Do this twice.

Microsoft Works™ Macintosh
Hold down the <Command> key and tap "="

Microsoft Works™ MS-DOS
Press <F9>

Figure 7

After a moment, the projected outcome to the election will appear in cells "E5" and "E7". The outcome will be expressed as percents of the total electorate voting for each candidate. *(See Figure 8.)*

Debriefing the Outcomes

After the spreadsheet has made its calculations, the groups should discuss the outcomes, comparing them to their earlier predictions. The groups should then review the predictions they wrote on the worksheet prior to the spreadsheet calculations and write a statement indicating their conclusions about any discrepancies between their predictions and the computer projections.

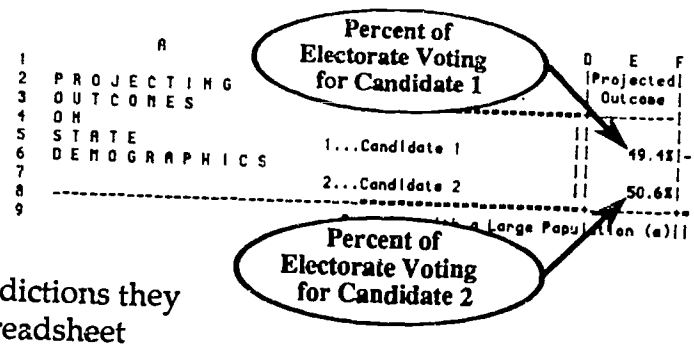


Figure 8

The Formulas

Even though the formulas in this spreadsheet are quite complex, the strategy for calculating the outcome of the election is simple. The formulas take each demographic category and select the counties that apply (i.e. counties with high population densities). Then the formulas add the populations of those counties, and multiply that sum times the weight entered for each candidate. The totals for each demographic category are then added to determine the projected number of votes cast for each candidate. Percentages are calculated from this. The following formula illustrates this strategy:

Total Votes for One Candidate	=	For each Demographic Category, the Sum of the Populations of the Counties that Apply	X	The Weight for Candidate and That Demographic Category

Figure 9

Groups may choose to redefine their weights and run the calculations again to test new theories resulting from their debriefing discussions.

Projecting the Election Outcome Based on Possible Events

Students have an opportunity, with the VoteLine Module II Spreadsheet, to change their weighting numbers and test possible scenarios or events that might or might not happen. You may want to discuss with the class how certain events can and have affected elections (e.g., the effect of the Iranian hostage situation on the Carter/Reagan campaign).

During this discussion, ask the students to suggest a number of possible scenarios that might affect the election. Write these scenarios on the board and ask students what effect the scenarios would have on how people view the candidates based on demographic characteristics. Some possible scenarios might be:

- Federal postal workers go on strike and the current administration decides to hire replacements rather than negotiate with the unionized postal employees.
- Loose money policies of the Federal Reserve result in rising inflation before the election.
- A prominent Democratic politician is accused of either illegal or immoral activity before the election.
- An armed conflict occurs involving a country where the success of the current government is in the best interest of the United States from both a national security and an economic point of view.
- The national government releases figures that indicate the war on drugs is failing and crime in general is increasing.
- A report is released showing that increasingly older Americans are not receiving adequate services.
- It is learned that the infant mortality rate in North Carolina has increased dramatically during the last year.
- A national disaster strikes, such as a tornado, hurricane, or flood, and the public is outraged by an inadequate government response to the needs of victims.
- Farm prices drop sharply and an increasing number of farmers face the prospect of bankruptcy.
- A local textile manufacturer announces a plant closing which will result in the loss of 1,000 jobs.
- Prominent national Republican leaders are implicated by recent findings in an ongoing investigation of HUD and the failed savings and loan institutions.

Divide the class back into their main groups and assign each group one or more of the scenarios. The groups should:

- discuss further the implications of their event in terms of demographic characteristics.
- decide how the candidates' positions might change. Students should consider the histories of the candidates — have they exhibited a willingness to change their positions in the past when faced with new situations.
- use a new copy of **Demographic Decision Coding Worksheet** to record new weight numbers and to justify their decisions.
- write the new weightings in **Demographic Decision Coding Worksheet** and enter them into the VoteLine Module II Spreadsheet and re-calculate the results.

Students may want to re-evaluate their new weightings and re-calculate again and again.

Finally, the groups should report on what they learned about the possible scenarios to the entire class.

VoteLine Module II Debriefing Activity

In this activity, students will discuss their experience with the preceding VoteLine Module II activities in order to gain further insights into group working, the problem solving process, and the use of computers in the area of politics.

Discuss the following questions at the conclusion of the demographic spreadsheet activities:

- What are the benefits of working in groups and what are some difficulties? How can the difficulties be overcome?
- How might the use of computer spreadsheets change the way that political campaigns are run?
- Who would benefit most from using computer spreadsheets to project election outcomes?
- Are there any dangers in using computers to project election outcomes? If so, explain.

Demographic Decision Coding Worksheet

Write two weights for each survey statement, one for each candidate. The weights should be numbers between 0 and 10 where 0 means "strongly disapprove of candidate," and 10 means "strongly approve of candidate."

Prompting Questions	Cand. A	Cand. B
1. How much will counties with high populations approve of each candidate? **Justification:**	G9	I9
2. How much will counties with high population densities approve of each candidate? **Justification:**	G10	I10
3. How much will counties with a high percent of the population under 25 approve of each candidate? **Justification:**	G11	I11
4. How much will counties with a high percent of the population over 65 approve of each candidate? **Justification:**	G12	I12
5. How much will counties with a high percent of annual growth approve of each candidate? **Justification:**	G13	I13

Demographic Decision Coding Worksheet

Write two weights for each survey statement, one for each candidate. The weights should be numbers between 0 and 10 where 0 means "strongly disapprove of candidate," and 10 means "strongly approve of candidate."

Prompting Questions	Cand. A	Cand. B
6. How much will counties with high per capita incomes approve of each candidate? **Justification:**	G14	I14
7. How much will counties with high education levels approve of each candidate? **Justification:**	G15	I15
8. How much will counties with a high percent of the population who are democrats approve of each candidate? **Justification:**	G16	I16
9. How much will counties with a high percent of the population who are republicans approve of each candidate? **Justification:**	G17	I17

Student prediction on election outcome prior to computer calculations:
_____ will defeat _____by a (wide, narrow) margin

Computer Projected Outcome	Comments and Discrepancies:
Candidate 1 _____% ___ **Candidate 1** _____% ___	

Materials

You will need the following equipment and software:

One or more student computer work stations. The computer(s) should be one of the following hardware/software configurations:

Apple IIe, IIc, or IIgs with printer and AppleWorks™ software version 2.0 or greater

Any MS-DOS computer with printer and Microsoft Works™ software version 2.0 or greater

Macintosh Plus, SE series, LC, or II series with printer and Microsoft Works™ software version 2.0 or greater

One telecomputing computer station:

The same type of computer used for the work stations but equipped with a modem, phone line, and telecomputing software

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MS-DOS	[ ] 3.5"	[ ] 5.25"

Please send me a copy of the VoteLine Module IV Activity Guide for the following telecomputing network(s).

FrEdMail	[ ]
Learning Link	[ ]

Name: _____
School System: _____
School: _____
_____
Address: _____
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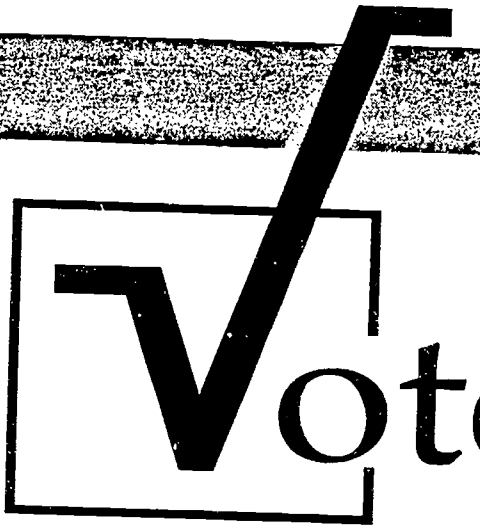
Phone Number: _____

Mail this form to:

VoteLine
Computer Services
North Carolina Department of Public Instruction
116 West Edenton Street
Raleigh, North Carolina 27603-1712



Module I
Activity Guide
Demographic Database On North Carolina Counties

Developed by the
North Carolina Department of Public Instruction

Fall 1992

NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION

BOB ETHERIDGE, STATE SUPERINTENDENT

VoteLine Module I

Demographic Database On Counties of North Carolina

Contents

VoteLine Module I Activity Competency Goals

Social Studies

- The learner will acquire information from a variety of sources.
- The learner will use information for problem solving, decision making, and planning.
- The learner will demonstrate skill in self-management and social participation.
- The learner will participate effectively in civic affairs.

Computer Skills

- The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.
- The learner will demonstrate knowledge and skills in using computer technology.
- The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply, and communicate information.

Module I Overview

In this module, students will:

- use the VoteLine Module I Database to identify, on a map of North Carolina, categories of counties based on their demographic characteristics (e.g., per capita income, age, education level, population).
- identify counties that would benefit from or encounter difficulties as a result of a variety of political actions (e.g., increased spending for education, cuts in social welfare programs, increases in agricultural subsidies).
- write letters to candidates describing counties with low education levels and asking what candidates will do to improve these situations.
- devise campaign strategies for specific regions of North Carolina that include the issues to be emphasized in speeches and that address budget concerns.

  Note: This activity can be conducted during non-election years. Students can select national leaders as opposing candidates or develop profiles of fictitious candidates.

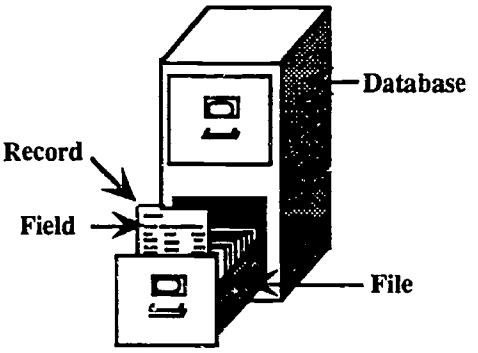
VoteLine Module I Database

The database available for this module will allow students to perform comparative analyses of the demographics of North Carolina counties, sorting and categorizing them to learn more about the history, politics, and demographics of North Carolina. Students will:

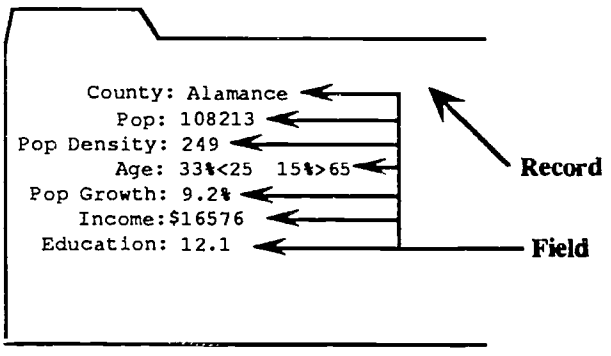
- use the database to identify counties that rank highest or lowest in various demographic categories (e.g., income, population, education level).
- use the database to compare various demographic categories (e.g., incomes, populations, education levels) for specific counties.
- participate in role playing activities where decisions are based on the use of the computer to analyze demographic information.

About Computer Databases

A database is a collection of related data arranged in a logical way to make it easy to store, update, retrieve, and analyze that data. Usually the computer disk is separated into data files which are separated into records, which are separated into fields. For example, there is a data file called "MODIDB" on the VoteLine diskette. Data on all the counties in North Carolina are stored in that data file and all the data on one particular county is stored in one record in that file. For example, there is a record for all the data on Alamance County, one for Gaston County, one for Yadkin County, etc. Each item of information on a particular county is called a field: the number of doctors in Yancey County is one field, the educational level of Dare County is one field. By having common fields in each record, the database management program can perform some many useful tasks with the data.



Databases can be compared with file cabinets



Sorting

Computer databases are very useful for identifying items or records that are foremost in some category? For instance, which counties in North Carolina have the highest percent of people over 65? Databases can arrange or **sort** records in a variety of ways: numerically from the highest numbers to the lowest (and visa-versa), alphabetically from "a" to "z" (and visa-versa), and chronologically from the most recent events to the oldest (and visa-versa). When you sort the **VoteLine** database on the percent of people over 65, the program re-arranges the records and displays them as a list, where the counties with the highest percent of people over 65 move to the top of the list, and counties with the lowest percent of people over 65 go to the bottom.

Searching/Selecting

Computer databases can also select specific items or records based on a described criterion. This allows the user of the **VoteLine** database to select a specific county (select the county where the name equals "Gaston") or a range of counties (select all counties with a population density between 100 and 150). A search description includes the field(s) to be searched, the comparison to be made (equals to, is greater than, contains, etc.), and the information being compared. A database can be searched based on more than one criterion, each one being separated by an "and" or an "or".

VoteLine Module I Activities

Map Activity

In this activity, students will use the VoteLine Module I Database to identify counties based on demographic characteristics and mark them on a political map of North Carolina counties to discover geographic patterns.

Divide the class into small groups. Give each group three copies of the political map of North Carolina counties provided on page 12. Assign each group three of the demographic categories listed below:

Population 1990
Population 1980
Population Growth
Population Density
Education Level (average grade completed)
Number of Doctors
Per Capita Income
Population Under 25
Percent of Population Under 25
Population Over 65
Percent of Population Over 65
Number of Democrats 1990
Number of Democrats 1980
Number of Republicans 1990
Number of Republicans 1980

Ask each group to use the VoteLine Module I Database to sort the five highest ranking counties and five lowest ranking counties for each of their three categories. Then have them shade, on the political map worksheet, the five highest counties in one type of shading or color and the five lowest counties in another shading or color. They should work on a separate map for each category.

The class should then write a statement on each worksheet indicating any relationship between the category and the counties' locations in relation to other counties. For example, the highest income counties may be predominantly in the piedmont region.

Instructions for Using the VoteLine Module I Database to Identify Counties

Students will identify counties in this activity by **sorting** the database which allows the student to arrange the records in alphabetical, numerical, or chronological order. This, for example, enables students to list the counties in order of population, those with the highest or lowest depending on the sort request. *(See Figure 1 for instructions on sorting.)*

One demographic category that may be assigned is the percent of people over 65 years of age. The students will sort the database program by "% > 65" from the largest values to the smallest numbers, placing the counties with the highest percent of people over 65 at the top of the list. Students will then locate, on the map, the five counties at the top of the list and shade them with a specific color or pattern. Next, students will **sort** the database from the smallest numbers to the largest, to place the lowest percent of people over 65 at the top of the list. They will then locate, on

Sorting Records

Sorting with AppleWorks™

Step 1
If you are currently at the multiple record layout, press <Open Apple>-<Z> to zoom in to one record layout.
Step 2
Move the cursor to the category upon which you want to sort.
Step 3
Press <Open Apple>-<A> to sort.
Step 4
The computer will place the following menu on the screen:

	Meaning
1.From A to Z	*Alphabetically from A to Z*
2.From Z to A	*Alphabetically from Z to A*
3.From 0 to 9	*Numerical order from smaller numbers to larger numbers*
4.From 9 to 0	*Numerical order from larger numbers to smaller numbers*

Step 5
Choose the order that will answer your question by typing 1, 2, 3, or 4 and pressing <RETURN>.
Step 6
After a moment the computer will display the database in multiple records layout arranging the records in the order that you specified.

Sorting with Microsoft Works™ Macintosh Version

Step 1
If you are currently at the form layout, pull down the **Format** menu and select **Show List.**
Step 2
Use the scroll bar to find the column for the category upon which you want to sort and click anywhere on that column to select it.
Step 3
To sort on that field, pull down the **Organize** menu and select **Sort....**
Step 4
If the field is numeric, the computer will give you the choice of sorting from "9 to 0" (from larger numbers to smaller numbers) or "0 to 9" (from smaller numbers to larger numbers).

If the field is alphabetic, the computer will give you the choice of sorting from "A to Z" (alphabetically) or from "Z to A" (reverse alphabetically).

If the field is a date or time, the computer will give you a choice of sorting "chronologically" or "reverse chronologically."
Step 5
Click the appropriate choice and then click <OK>.
Step 6
After a moment the computer will display the database in list layout arranging the records in the order that you specified.

Sorting with Microsoft Works™ MS-DOS Version

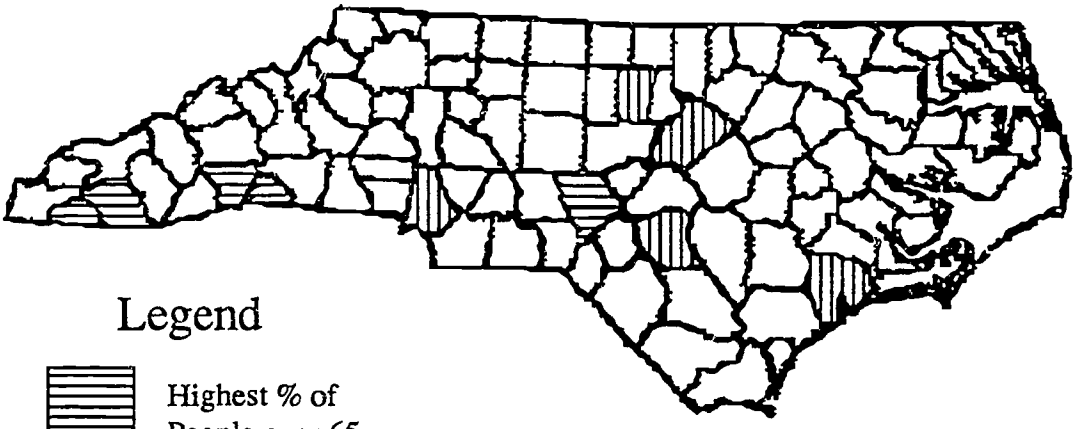
Step 1
If you are currently at the form layout, press <Alt>-<O> to pull down the **Options** menu and select **View List.**
Step 2
Use the arrow keys to find the column for the category upon which you want to sort. Place the highlighter anywhere in that column.
Step 3
Press <Alt>-<Q> to pull down the **Query** menu and select **Sort....**
Step 4
Type the name of the field upon which you want to sort the database.
Step 5
Press the <TAB> key to move the cursor to the Ascend/Descend prompt. Use the arrow keys to place the dot in the appropriate ordering method.

Ascend: Arranges numerically from smallest numbers to largest numbers, alphabetically from A to Z, or chronologically.

Descend: Arranges numerically from largest numbers to smallest numbers, reverse alphabetically from Z to A, or reverse chronologically.

Step 6
After a moment the computer will display the database in list layout arranging the records in the order that you specified.

Figure 1



The counties with low percents of people over 65 are mostly urban, university communities or military locations. The counties with the highest percents of people over 65 seem to cluster in the west.

Figure 2

the map, the five counties at the top of the list and shade them another color or pattern. Finally, the group will examine the map to see if the counties at either end of the spectrum seem to group together geographically on the map and write a statement on the worksheet indicating their conclusion. *(Look at the sample map in Figure 2.)*

Politics and Demographics Activity

In this activity, students will explore relationships between demographics and political actions and use the VoteLine Module I Database to identify counties that would be affected by specific political initiatives.

Spend a class session discussing demographic characteristics and how they relate to politics. For example, discuss how changes in social security benefits would affect counties with a large percent of people over 65. Show the students a list of the demographic categories in the VoteLine Module I Database and ask them to think of possible political actions that might benefit or cause difficulties for a particular demographic category. Below are the demographic categories in the VoteLine Module I Database:

Population 1990
Population 1980
Population Growth
Population Density
Education Level (average grade completed)
Number of Doctors
Per Capita Income
Population Under 25
Percent of Pop. Under 25
Population Over 65
Percent of Pop. Over 65
Number of Democrats 1990
Number of Democrats 1980
Number of Republicans 1990
Number of Republicans 1980

Divide the class into groups with each group having access to a computer and the VoteLine Module I Database. Groups may share a single computer. Assign each group

a political issue such as a campaign promise, a law, or any number of initiatives that would affect people. Ask each group to perform the following tasks:

- identify the categories of people (e.g., high population density, low education level, etc.) that might benefit from the initiative.
- identify the categories of people (e.g., high population density, low education level, etc.) that might encounter difficulties from the initiative.
- use the VoteLine Module I Database and the decisions made in the first two tasks to identify the counties that would benefit or encounter difficulties as a result of the initiative .
- report to the rest of the class the findings. (Students might use graphs, maps, or other visual aids in their presentations.)

Letter Writing Activity

In this activity, students will use the VoteLine Module I Database to examine demographic characteristics of counties with the lowest education level. They will then write or word process a letter to one or more of the candidates, asking what they plan to do, if elected, to improve these circumstances.

Divide the class into small groups with each group having access to a computer and the VoteLine Module I Database. Groups may share a single computer. Ask the groups to use the database to identify the five counties with the lowest education level. They should look at the records of each of these counties to find other related statistics, such as per capita income, number of doctors per 100 residents, population growth, etc.

After groups have collected and discussed this information, they should write or word process letters to one or more candidates, reporting the data and asking them what actions they would take as President, Senator, etc. that would improve this situation. This letter may be written as a group or by individual students.

Moving Between Table & Record Layouts

AppleWorks™ Apple II series
Place the highlighter in the record for which you want to show all fields. Hold down the <Open-Apple> key and tap the letter "Z". To go back to the table or list format, hold down <Open-Apple> and tap "Z" once again.

Microsoft Works™ Macintosh Version
Place the highlighter in the record for which you want to show all fields. With the mouse, pull down the Format menu and select Show Form. To go back to the list format, pull down the Format menu once again and select Show List.

Microsoft Works™ MS-DOS Version
Place the highlighter in the record for which you want to show all fields. Hold down the <Alt> key and tap the letter "O". This will pull down the Options menu. Use the arrow keys to select View Record and press <ENTER>. To go back to the list format, hold down <Alt> key again and select View Lists and press <ENTER>.

Figure 3

Campaign Manager Activity

In this activity, your students will become members of campaign committees, and use demographic information to decide on campaign strategies.

Divide your class into small groups. Each group will be the campaign committee for one of the candidates. You may have more than one group working for each candidate. During non-election years, your students can create a fictitious candidate based on the kind of candidate they think could win an election.

Tell each group that they have a certain amount of money to spend in North Carolina. Ask them to identify the few counties where they would spend at least half of their money. You should lead students to consider the population of each county along with the demographic characteristics that would be most receptive to the candidate's message. A sample process for solving this problem follows:

Step 1

You have determined that your candidate is appealing to the rural, agricultural vote. The first course of action might be to sort the database by population density. The least densely populated counties will likely be rural and agricultural, so you will sort the records from the smallest numbers to the largest.

Step 2

Scroll down the list of counties until you find the first one with a large city (by North Carolina standards). This might be Rowan County with the city of Salisbury. Look at the population density. Rowan County's density is 214 with the next county above at 198. Based on this information, you might decide to make your cut-off population density 200 which means that you will only consider counties that have a population density of less than 200.

Step 3

Of the counties that have a population density of less than 200, you want to concentrate your funds on the ones with the largest populations. But before you sort counties by population, you'll want to isolate the rural counties so that only those counties will be sorted. This is done by **selecting** or **searching** for specific counties — in this case, counties with a population density less than 200. *(See Figure 4, 5, or 6 depending on your software.)*

Searching/Selecting with AppleWorks™

Step 1
Press <Open Apple>-<R> to tell Appleworks™ that you want to search for specific records.

Step 2
You will then see a list of all the fields in the database. Use the arrow keys to select the field on which you want to base your search and press <RETURN>.

Step 3
You will then be given a list of possible relationships:

1. equals
2. is greater than
3. is less than
4. is not equal to
5. is blank
6. is not blank
7. contains
8. begins with
9. ends with
10. does not contain
11. does not begin with
12. does not end with

Step 4
Pick the relationship that will identify the record(s) that you want by using the arrow keys or typing the number. To select the relationship press <RETURN>.

Step 5
The computer will then ask for the "comparison information". Type the comparison information and press <RETURN>

Step 6
You may add another criterion to the search. If so, you must decide whether AppleWorks is to select the records that fulfill the first criterion and the second criterion, or the first criterion or the second criterion. Using the and connector tells AppleWorks to find records that fulfill both criteria and using the or connector tells it to find records that fulfill either criterion . Press <RETURN>, and go to step 2.

If you are not adding another criterion , simply press the <ESC> key. After a moment, the records that fulfill the criterion will appear on the screen.

Figure 4

Step 4

After selecting only counties with a population density less than 200, sort again on the population from the largest to the smallest. After looking at the top population counties, you may decide to use 80,000 as the cut-off number. Most students would decide to spend their funds on Johnston County, with 81,306 people and all other counties with larger populations.

Step 5

The statement that students might write would be something like this:

In the presidential campaign for Candidate A, we decided to concentrate on rural, agricultural counties. We decided to include only counties with a population density of less than 200 people per square mile. We also decided to spend more money in the rural and agricultural counties with the largest populations. So we included counties with populations of more than 80,000 people. After performing our analysis of the database, we decided to spend half of our campaign budget in Onslow, Pitt, Randolph, Robeson, Wayne, Iredell, Rockingham, Cleveland, Union, Craven, and Johnston Counties.

Searching/Selecting with Microsoft Works™ Macintosh Version

Step 1
Pull down the **Organize** menu and select **Record Selection...** to tell Works™ that you want to search for specific records. You will see the control panel in figure DB (Mac Select).

Step 2
Click the **Delete Rules** button again and again until the words "No Rules Are In Effect" appears beside the prompt, "Selection Rules:".

Step 3
On the "Record Selection," you will see two scroll windows at the top. Scroll through the one on the left until you see the field upon which you want to base your search and highlight it by clicking on the word.

Step 4
Scroll through the window on the right until you see the relationship that will identify the record(s) you want to see and highlight it by clicking on the word. Below are your possible relationships:

equals	contains
begins with	is greater than
is greater than or equal to	is less than
is less than or equal to	is not equal to
is blank	ends with
does not contain	does not begin with
does not end with	

Step 5
Next, type in the comparison information in the box next to the prompt, "Record Comparison Information:". When finished, click the **Install Rule** button.

Step 6
You may now add another criterion to the search. If so, you must decide whether Works™ is to select the records that fulfill the first criterion and the second criterion, or the first criterion or the second criterion. Using the and connector tells Microsoft Works to find records that fulfill both criteria and using the or connector tells it to find records that fulfill either of the criterion. Make your selection by clicking the And or Or radio button.

If you are adding another criterion return to step 3. If you are not adding another criterion, Click the **Select** button. After a moment, the records that fulfill the criterion will appear on the screen. Use the **Show List** or **Show Form** options under the **Format** menu to change your view of the records.

Figure 5

Identifying issues to be emphasized in each region is another suggested activity for the campaign committee groups. This activity would involve identifying issues on which the candidate has taken a strong position and determining which demographic categories of people would agree with the candidate's position.

After each group has identified two or three positions and the demographic categories that would most benefit from that stand, have the students use the sort function of the VoteLine Module I Database to place the counties with one of the target demographic characteristics at the top of the list. Determine if a particular region appears more often at the top of the list. If there is a predominant number of one or two of the regions at the top, then the committees might choose to concentrate on that position for campaigns. A sample process for solving this problem follows:

Step 1

You have determined that two major positions taken by your candidate are improvement in education and mass transportation. After research and discussion, students might determine that counties with low education levels would benefit most from improvements in education, and counties with high population densities would benefit from mass transit.

Step 2

Using the VoteLine Module I Database, you would sort the counties first by education level from the smallest numbers to the largest ones. After this has been completed, you will look at the top 10 or 15 counties to determine their region. For low education levels, you might find that of the 10 counties with the lowest education level, four are coastal and five are mountain. You might conclude that education should be emphasized in those two regions.

Step 3

When sorting on population density, you would sort from the largest numbers to the smallest because the counties with the largest population densities would most benefit from mass transportation. Of the 10 counties at the top of the list, you might find that eight of the counties are in the piedmont. So you might conclude that your candidate should emphasize mass transit in the piedmont region.

Searching/Selecting with
Microsoft Works™
MS-DOS Version

Step 1
Hold down the <Alt> key and tap the letter <Q> to bring down the **Query** menu. Select **Define** and press <ENTER>.

Step 2
Using the arrow keys move the highlighter to the item or field by which you want to select.

Step 3
Type in your search criterion. If you are looking for all counties in the coastal region, type "COASTAL" by the region field and press <F10>. If you are looking for counties with a population density less than 50, type "<50" in the density field and press <F10>. You can search by more than one criteria. *(See "Querying/using criteria" in the Microsoft Works User's Guide [1988] for more information.)*

Figure 6

Ask the groups to write a different campaign speech for their candidate for each region, emphasizing the positions of the candidate that would be best received by the citizens of the region. Have a member of each group deliver their speech to the entire class.

Other activities might be for students to share the strategies that they have discussed through posters, media ads, jingles, etc.

VoteLine Module I Debriefing Activity

In this activity, students will discuss their experience with the VoteLine Module I activities to gain further insights into group working, the problem solving process, and the use of computers in politics.

Discuss the following questions at the conclusion of the demographic analysis activities:

- What were some of the benefits of using a computer database for acquiring information about the counties of North Carolina rather than using reference books?
- What are the benefits of working in groups and what are some difficulties? How can the difficulties be overcome?
- How might access to computer information change the way that political campaigns are run?
- How might access to computer information change the way or influence whom the people decide to vote for in elections? What kind of computer information would be beneficial to voters?
- What activities did you do with the computerized information that would have been too difficult if the information had only been in print form?

Political Map of North Carolina Counties

Legend

Report:

Materials

You will need the following equipment and software:

One or more student computer work stations. The computer(s) should be one of the following hardware/software configurations:

Apple IIe, IIc, or IIgs with printer and AppleWorks™ software version 2.0 or greater

Any MS-DOS computer with printer and Microsoft Works™ software version 2.0 or greater

Macintosh Plus, SE series, LC, or II series with printer and Microsoft Works™ software version 2.0 or greater

One telecomputing computer station:

The same type of computer used for the work stations but equipped with a modem, phone line, and telecomputing software

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The VoteLine Diskette and Module IV Activity Guide will be available from The North Carolina Department of Public Instruction beginning August 1, 1992

Complete the form, cut here, and mail as indicated

VoteLine Order Form

Please copy the VoteLine Diskette in the format marked below on the blank double density diskette enclosed. (Enclose a separate diskette for each format needed)

Computer	Diskette Type	
Apple II	[ ] 3.5"	[ ] 5.25"
Macintosh	[ ] 3.5"	
MS-DOS	[ ] 3.5"	[ ] 5.25"

Please send me a copy of the VoteLine Module IV Activity Guide for the following telecomputing network(s).

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Learning Link	[ ]

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