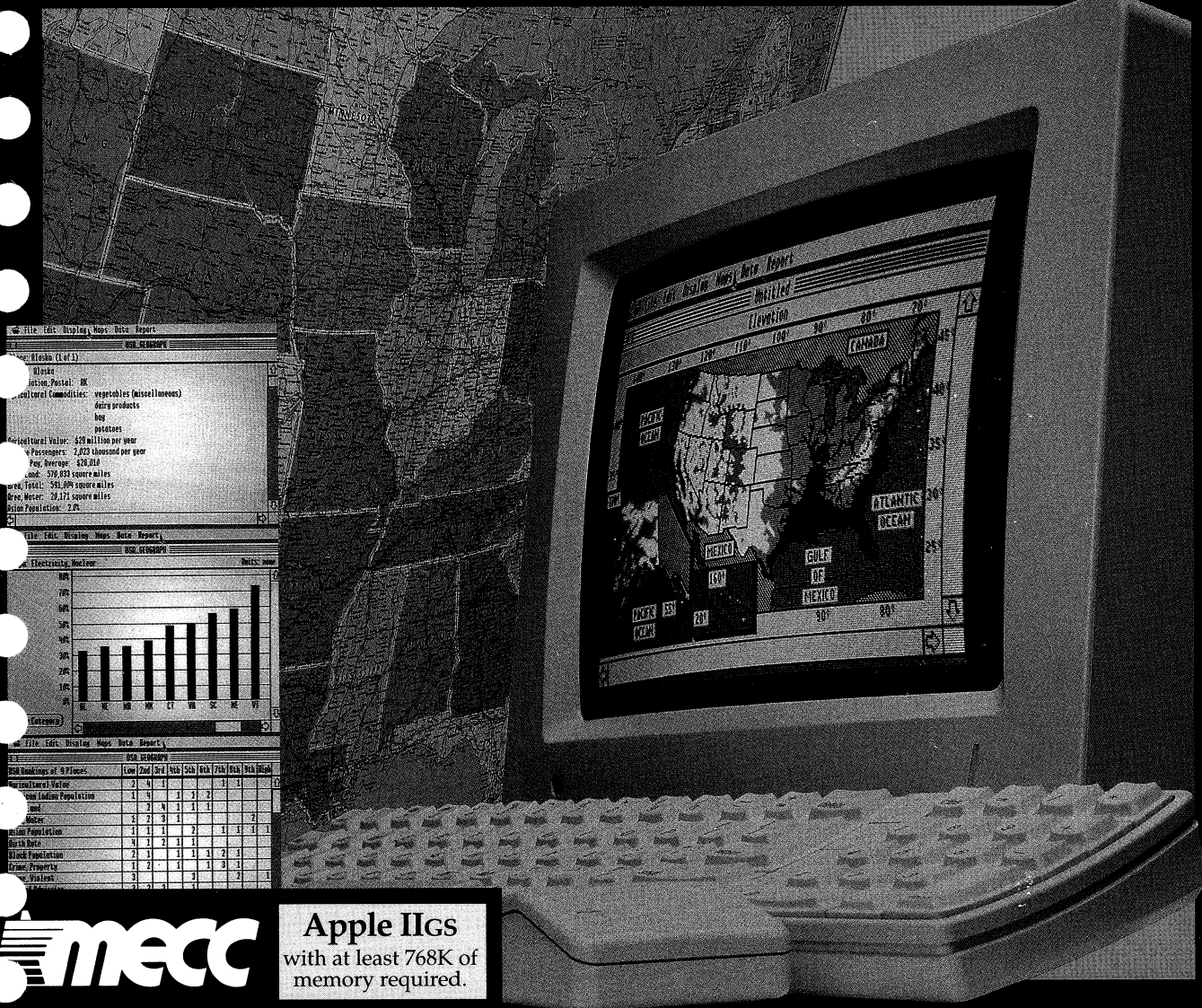


USA GeoGraph™

User's Guide



Apple IIGs
with at least 768K of
memory required.



USA GeoGraph User's Guide

USA GeoGraph User's Guide

This manual is compatible with the *USA GeoGraph* Program and Information Disks, Version 1.x.

This manual was created with Aldus *PageMaker*®, a Macintosh® SE/30 microcomputer, and the Apple® LaserWriter Plus®. Text was created with *MacWrite*™ and *PageMaker*. Graphics were produced with *MacPaint*™, *SuperPaint*™, *PageMaker*, and *Adobe Illustrator*™. Screen dumps from the Apple IIgs were transformed into *MacPaint* files through the use of FingerPrint® GSi, *Apple File Exchange*™, and *Canvas*™.

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SOFTWARE WARRANTY

MECC warrants that the accompanying disks will operate on an Apple IIgs computer with Version 01 ROM, at least 768K of memory, and at least one 800K disk drive. Should the disks ever fail to operate, send them, with the original labels, to MECC for replacement.

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An Introduction to *USA GeoGraph*

USA GeoGraph is a geography discovery-learning tool. That may sound a bit dull at first, but *USA GeoGraph* is anything but dull! In fact, it's an important development in geographic education. You can use its on-screen maps, graphs, and database to explore the fifty states and six U.S. territories (including the District of Columbia) as well as to better understand basic concepts of geography. But the real beauty of *USA GeoGraph* is that it functions as a "living map" because its maps and database are *interactive*. That is, what you do with maps affects the database and *vice versa*. As a result, you can explore the United States in many different ways—whichever is best suited to your goals and your own particular style.

The on-screen maps in *USA GeoGraph* are among the most detailed, accurate maps you've seen on a microcomputer. In addition, the memory capabilities of the Apple IIGs allow you to manipulate those maps and the accompanying database (which includes 105 categories of information) in ways that will help you understand and appreciate the differences among states and territories and the patterns that emerge as you use the computer to explore the nation.

The focus of *USA GeoGraph* is on "human geography," the relationship between *where* people live and *how* they live. *USA GeoGraph* includes information about the physical, demographic, economic, and cultural aspects of the United States, but its ultimate aim is to help you understand and appreciate the differences—and similarities—of people around the country and how they go about working with what their environments provide.

The true value of *USA GeoGraph* lies in its power as a flexible investigative tool. You can use *USA GeoGraph* to help you learn to *think like a geographer*, so to speak. It's designed to aid in developing inquiry and analytical skills in the field of geography. The on-screen maps, graphs, and database functions in *USA GeoGraph* will help you become more proficient at asking and answering important, meaningful questions about the United States.

While *USA GeoGraph* is indeed a powerful tool, it *is* just that: one of *many* tools you should use in geographic education. Textbooks, encyclopedias, atlases, wall maps, and globes all have vital roles to play in the geography learning process. Together with these other tools, *USA GeoGraph* can enhance geographic education, helping to make it exciting and meaningful.

For more information about *USA GeoGraph*, including its instructional objectives and the equipment you need to use it, turn to the section of this *User's Guide* entitled "The Product at a Glance." But, before you do that, you might want to know a little bit about some of the basic concepts that inspired and guided *USA GeoGraph*'s design.

What is *USA GeoGraph*?

An Introduction to *USA GeoGraph*

The “living map” concept

As we said before, *USA GeoGraph* can be thought of as a “living map.” In other words, consider *USA GeoGraph* a combination map-database that you can *interact* with. You can “zoom in” on different parts of the country. You can use electronic map overlays to see the United States from various thematic perspectives. You’ll see the map change as you use the database to explore the states. And you can use the map to manipulate the database. While this “living map” may not be as comprehensive or as detailed as maps you can find in atlases and geography textbooks, it is far more versatile. What other map do you know of allows you simply to “touch” it in various places and, in so doing, manipulate a database full of detailed information?

What brings *USA GeoGraph* to life are the tools of the Apple “desktop” (especially that handy little rodent, the mouse) and the enhanced video and memory capabilities of the Apple IIgs. On the pages that follow, this *User’s Guide* assumes that you know the standard Apple desktop “lingo,” so if you’ve never used the desktop before, look through your *Apple IIgs Owner’s Guide* to familiarize yourself with it. The *Apple IIgs Owner’s Guide* will tell you what you need to know about using the mouse (such as “clicking,” “double-clicking,” and “dragging”), icons, scroll bars, pull-down menus, dialog boxes, and other standard features of the desktop environment. Of course, a little practice will work wonders, too.

The *USA GeoGraph* “living map” was developed not only to take advantage of the Apple desktop environment but also to accommodate different learning and working styles. You’ll find in using *USA GeoGraph* that there are many different ways of doing the same thing. This isn’t redundancy. It’s *flexibility*. Some people are highly text-oriented and will have no trouble selecting nations from an on-screen list and seeing data search results expressed in a data table. By contrast, other people are far more graphics-oriented and will have greater success selecting states from a map and viewing search results on a map as well. And depending on what you’re interested in at any given time, you may use one method or the other to do different things. In short, *USA GeoGraph* was designed for ease and flexibility of use.

Geography today

You’ve probably read in the newspaper or seen on television news reports how most of today’s students are sorely lacking in basic knowledge of geography. Few students can correctly point to such nations as France, Iran, or Vietnam on a world map. More than twenty percent, in fact, can’t even find the United States! When asked simple yet important facts (such as “What is the approximate population of the United States?”), most students are at a loss to do anything but guess. And when it comes to understanding more complex geographic concepts—well, you get the point.

An Introduction to USA GeoGraph



DOONESBURY

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If this were only a matter of “trivia,” it might not be so bad. But it has far more serious implications. In *What We Don't Know Can Hurt Us*, the American Council on Education states that “To deal effectively with the multiplicity of problems we face in this shrinking world requires an increasing international competence.”¹ What’s more, the Joint Committee on Geographic Education of the National Council for Geographic Education and the Association of American Geographers warns that “Americans’ ignorance of their own country and of the world will have dire consequences for our nation’s welfare, strength, and global interdependence . . .”² To be sure, there’s nothing trivial about geographic education.

In an effort to give greater structure and impetus to geography education, geographers have identified five fundamental themes to consider. To achieve “geographic competence,” students should have a firm grasp of these themes and how to apply them to information about the world. These themes often overlap, but they’re nevertheless useful in helping people to think about the United States and the world as the complex, interactive systems that they are.

*Five themes of
geography
education*

¹Commission on International Education, American Council on Education, *What We Don't Know Can Hurt Us* (Washington, D.C., 1984), p. 2.

²Joint Committee on Geographic Education of the National Council for Geographic Education and the Association of American Geographers, *Guidelines for Geographic Education: Elementary and Secondary Schools* (Washington, D.C., 1984), p. 1.

An Introduction to USA GeoGraph

The five themes of geography education are:

1. Location
2. Place
3. Relationships within Places
4. Movement
5. Regions

Location

Location refers to position on the earth's surface. You can think in terms of "absolute location," in which you use a grid of latitude and longitude lines to define precisely where you are, unrelated to anyone else. In other words, what does it mean to you that you're located at such and such latitude and longitude? Does it somehow affect your life? Consider climate, for example. A different absolute location, perhaps a matter of just a few degrees on a map, can make a big difference in your everyday life.

You can also think in terms of "relative location," in which you consider where you are in relation to somewhere else. Think of how far away you live from relatives. How far away do you live from the original sources of things you may eat and drink every day, such as beef, corn, and milk? Where did the petroleum products you put in your car or the wool in your sweater come from? And what does that mean to you—actually and potentially?

Place

Place refers to physical and human characteristics, how locations and people are similar as well as what makes them unique. If you describe what Wyoming is like, you're probably going to describe it primarily in terms of "place." The physical characteristics of place involve geological, atmospheric, and biological processes, among others. So if you describe the physical characteristics of Wyoming, you would talk about the land, the weather, the animal and plant life, and so on. The human characteristics of place involve the composition of the population, settlement patterns, economic activities, political structures, and the wide range of cultural phenomena, from art to religion. When you describe a "place," you will almost invariably do so in terms of your *own* "place," noting how the two places are alike and different.

Relationships within places

Relationships within Places refers to the complex interrelationship between the physical and human characteristics of a place—in short, how people interact with their environment. All places offer advantages and disadvantages to their human populations. People take what the environment provides and do their best to make the most of it. In doing so, they may change the environment by building dams, canals, and irrigation systems. People also change *themselves*, adapting to those aspects of the environment they cannot change. In this way, the physical environment greatly affects human culture, including architecture, clothing, art, eating habits, socio-political structures, and even religious beliefs.

An Introduction to *USA GeoGraph*

Obviously, a drastic change in physical environment can lead to drastic changes in human culture. This occurs when people move from one environment to another as well as when environments themselves undergo change caused either by nature or by their human inhabitants.

Movement refers to the ways in which people interact with each other. People move from one location to another and communicate with people located far away. They trade with people in other locales, exchanging the products of their labor and environment with those of another place. Today you may eat an orange grown in Florida, wear a shirt made out of cotton from a farm in Arkansas, and listen to a stereo system from California. You may read a book written by a New York author and your next-door neighbor may have been born in Hawaii. And you hear news from all over the world. In today's world, including the United States, no place is totally self-sufficient. The constant movement of people, ideas, and commodities shapes our lives every day.

Regions, the last of the five major themes, refers to the basic unit of geographic study. Humans are organizing, classifying creatures, so it's only natural that we group nations and states together in regions. But those regions may vary, depending on the organizing criteria we're using. States may be grouped together in accordance with the points on a compass—North, South, East, West. Or we may define regions by dialects, ethnic groups, climates, political affiliations, or principal trade commodities. And regions can change over time; a state that was part of a region that produced more energy than it consumed twenty years ago may now be part of a region that consumes more energy than it produces. Why did this occur? What regions do *you* belong to? And what other states belong to those same regions?

USA GeoGraph can make a valuable contribution to modern geographic education. But, as with any tool, its value depends on how it's used. A hammer won't do you much good if you hold it by the head and strike with the handle. Similarly, these five themes may help you use *USA GeoGraph* wisely by helping you ask the kinds of questions and performing the kinds of investigations that will enable you to *really learn* about the United States.

The next section of this *User's Guide* is called "A Step-by-Step Look at *USA GeoGraph*," and its purpose is precisely what its name implies. By following its instructions step-by-step, you should get a good idea of how to use *USA GeoGraph*'s many features quickly and efficiently. In addition to descriptive section headings, the outside margins contain several special symbols designed to be recognizable at first glance.

Movement

Regions

How to use this User's Guide

An Introduction to *USA GeoGraph*



The mouse symbol or keyboard symbol appears next to most “steps.” They signal actions that you should take. The mouse symbol appears next to actions primarily involving use of the mouse. By the same token, the keyboard symbol appears next to actions primarily involving use of the keyboard. In some cases, both symbols are used to signal those actions in which both the mouse and the keyboard are used.



The lightbulb symbol indicates “tips” or “helpful hints.”



The exclamation symbol indicates very important points that you should be well aware of. Remembering these points will make using *USA GeoGraph* much easier.



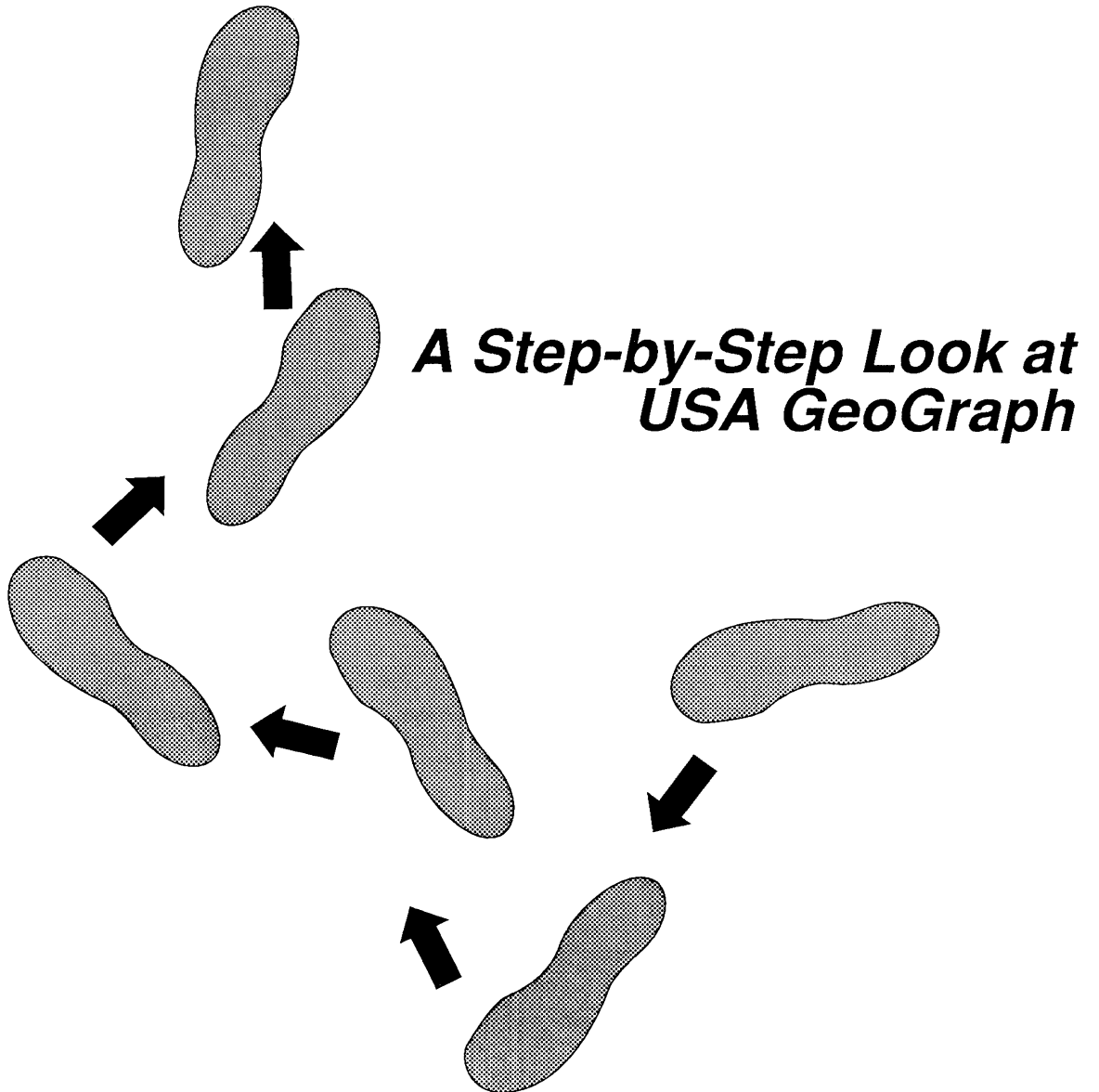
The stop sign warns of potentially “hazardous” activities that, if performed thoughtlessly or incorrectly, could result in frustration and wasted effort.

Following the “Step-by-Step” section, a “Reference” section describes the *USA GeoGraph* menu bar and each command to which it provides access. It also describes the results of various actions with the keyboard and the mouse. Subsequent sections of this *User's Guide* provide special tips and techniques for using *USA GeoGraph* and answer a number of basic questions you may have about it. The appendices to this *User's Guide* provide various kinds of useful information, including credits, instructions for using data disks and hard disks, descriptions of the data categories, and a bibliography. An index follows the appendices.

This *User's Guide* is one of two support manuals available to help you use *USA GeoGraph* effectively. If you're going to be using *USA GeoGraph* with students in a classroom setting, we recommend the *USA GeoGraph Classroom Guide*, which contains more than forty lessons and student activities as well as textbook correlation information. It also includes material designed to help you conduct in-service teacher training on the use of *USA GeoGraph*.

Also of interest

USA GeoGraph is a companion program to *World GeoGraph*, MECC's first “Living Map” product. *World GeoGraph* has won several awards of excellence, including a *Classroom Computer Learning* Software Award and the Software Publishers Association Critic's Choice Award as “Best Education Product.” It includes dozens of interactive on-screen maps, a comprehensive, 55-category database with information about 177 nations, and other powerful features that provide users with a flexible, enjoyable means of learning about the world. Like *USA GeoGraph*, *World GeoGraph* comes with a detailed, illustrated *User's Guide*. A helpful *Classroom Guide* is also available.



A Step-by-Step Look at *USA GeoGraph*

USA GeoGraph is a geography discovery-learning tool featuring on-screen maps, graphing capabilities, and an in-depth database that includes 105 categories of information about the fifty states and six U.S. territories. It is *not* designed to function as an "electronic atlas." Rather, it is designed to help users "think like geographers" as they exercise their inquiry and analytical skills in learning about the United States.

If you're using *USA GeoGraph* with students, they should be able to use it to develop their skills at:

- using a database as a tool for inquiry and analysis in geography and other social sciences;
- observing patterns of similarities and differences among states;
- observing possible correlations among different types of geographic, demographic, social, and economic data; and
- understanding the basic geographic themes of location, place, relationships within places, movement, and regions.

In addition, teachers can use *USA GeoGraph* as a tool for:

- displaying maps, charts, and data to support classroom lectures;
- creating student handouts; and
- examining geographic data in preparation for classroom activities.

To use *USA GeoGraph* you need the following equipment:

- an Apple IIGs computer with ROM Version 01, a mouse, and at least 768K of memory (product performance increases with additional memory);
- a color monitor (a monochrome monitor can be used, but *without* full benefit of the on-screen thematic maps);
- at least one 3.5" 800K disk drive (*two* are recommended because product performance increases with an additional disk drive); and
- an Apple printer (any ImageWriter or LaserWriter) if you plan on printing *USA GeoGraph* reports or windows.

The program at a glance

Description

Objectives

Equipment required

USA GeoGraph User's Guide

A Step-by-Step Look at *USA GeoGraph*

Getting started

Follow these steps to begin using *USA GeoGraph*:

Step 1 If you're using one disk drive, insert the *USA GeoGraph* Program Disk.

If you are using two disk drives, insert the Program Disk in Drive 1 and the Information Disk in Drive 2.

Step 2 Turn on your Apple IIs and wait for the desktop (Figure 1) to appear (approximately one minute).

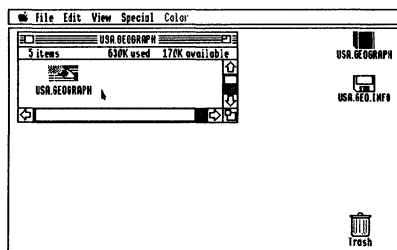


Figure 1



Figure 2



Step 3 If the Program Disk window (as seen in Figure 1) has not appeared on the screen, click on the Program Disk icon to highlight it and select "Open" from the File menu to open the window.

The *USA GeoGraph* icon (Figure 2) is one of several icons in the Program Disk window.



Step 4 Click on the *USA GeoGraph* icon to highlight it and select "Open" from the File menu.

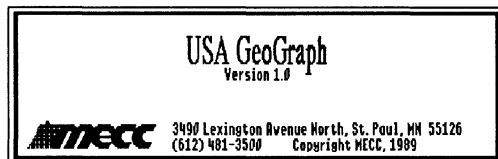


Figure 3

The computer will take about a minute to open the program, during which time the title screen will appear (Figure 3).

A Step-by-Step Look at USA GeoGraph

- Step 5** When the Overview Map appears on the screen (Figure 4), you're ready to start working with *USA GeoGraph*.

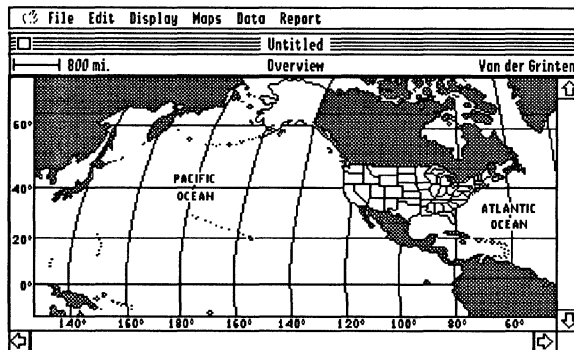


Figure 4

If you're using two disk drives, you won't have to bother with disk-switching. *But if you're using only one disk drive, you'll have to switch disks whenever the program asks you to do so.* So have your Information Disk handy at all times!

The first important feature of *USA GeoGraph* that appears on the screen is the Overview Map, so let's start exploring the program—and the United States itself—with maps.

Note the information bar just above the Overview Map. On every map screen, the information bar contains data about the scale and projection of the map you're looking at and some information about the map's thematic content. For different types of screens, the information bar contains different types of data.

- Step 1** Use the mouse to move the cursor up the menu bar and pull down the Maps menu.

- Step 2** Select "Hide Boundaries" from the Maps menu.

You should now see the Overview Map without state boundaries (Figure 5). This is just one of the many ways in which you can manipulate *USA GeoGraph* maps. Let's try some more.

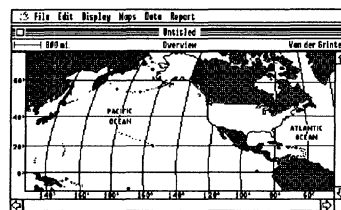


Figure 5

Exploring the United States with maps

Using theme maps



A Step-by-Step Look at USA GeoGraph



Step 3 Pull down the Maps menu again and select "Fifty States Map."

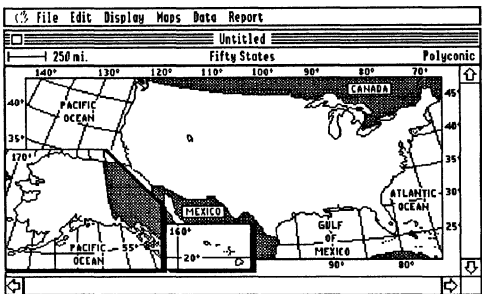


Figure 6

You now "zoom in" on a map of the fifty states in the union (Figure 6). Because you previously used the "Hide Boundaries" command, the boundaries to the fifty states still do not appear on this map. We'll tell you how to bring the boundaries back in just a moment.



Step 4 Pull down the Maps menu again and select "Theme Map."

The dialog box that now appears (Figure 7) allows you to select one of 24 thematic maps to view at the "Fifty States" level.

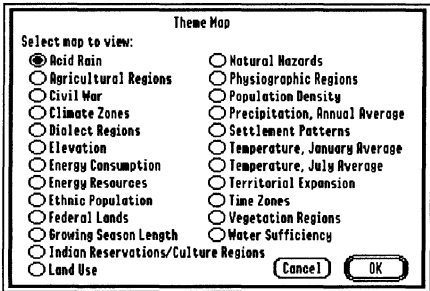


Figure 7



Step 4 Select "Climate Zones" from this dialog box and then click OK.

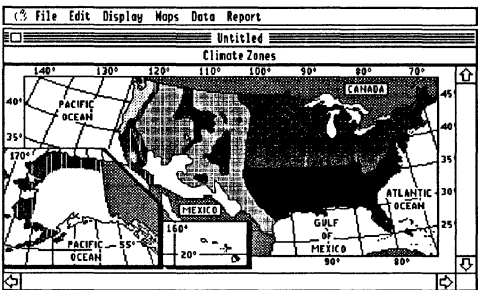


Figure 8

The map that now appears (Figure 8) shows the climate zones in the United States. Note that the information bar has changed to remind you of what's being shown on the screen. But what do all of those different colors mean? You need a key!



Step 5 Pull down the Maps menu and select "Show Key."

A Step-by-Step Look at *USA GeoGraph*

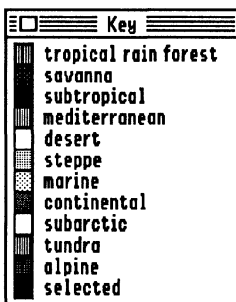
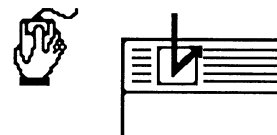


Figure 9

Now a key window appears on the screen (Figure 9). You can “grab” this window by its title bar and drag it to wherever you want it on the screen. When you don’t want it anymore, you can get rid of it either by clicking in the close box (at the left end of the title bar) or by clicking anywhere on the map window. If you want to see the key again, all you have to do is select “Show Key” again.

Step 6 When you’ve finished looking at the climate map, close the key window (if you haven’t done so already) by clicking in its close box. Then pull down the Maps menu and choose a different theme map to examine. Go ahead and look at as many theme maps as you like.



Step 1 Once you’ve finished looking at theme maps for the time being, pull down the Maps menu and select “Blank Map.”

Sure enough, you’re left with a blank map.

Step 2 Pull down the Maps menu and select “Show Boundaries.” (Remember how it used to say “Hide Boundaries”? This command acts as a “toggle switch,” allowing you to switch between showing and hiding boundaries.)

The state boundaries should now reappear. Notice that most boundaries are quite distinct, but some of the smaller states are unclear or even “invisible.” We can take care of that by “zooming in” on a region.

Step 3 Pull down the Maps menu and select “Region Map.”

Working at the region level



A Step-by-Step Look at USA GeoGraph



Step 4 Select "South" and then click OK.

The dialog box that now appears (Figure 10) allows you to choose a region to zoom in on.

You should see a "zoomed-in" view of the South on the screen. Notice how much clearer the boundaries are now. Also, note that you can see major rivers and large metropolitan areas.

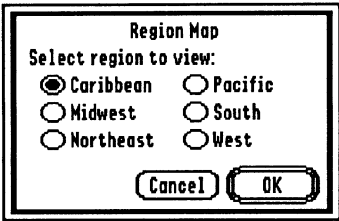


Figure 10



Step 5 Now try to select "Theme Map."

Oops! You can't select "Theme Map." It's "grayed out," indicating that it's inactive. In USA GeoGraph, theme maps are available only at the Fifty States level.



But there are other kinds of maps you can look at instead.

Using the "Compare" command



Step 1 Pull down the Maps menu and select "Compare."

A dialog box appears (Figure 11) that allows you to choose a state or territory to compare to all the other states and territories as well as the numeric category you'll use to compare them. Or you can choose to compare states and territories to the United States overall.

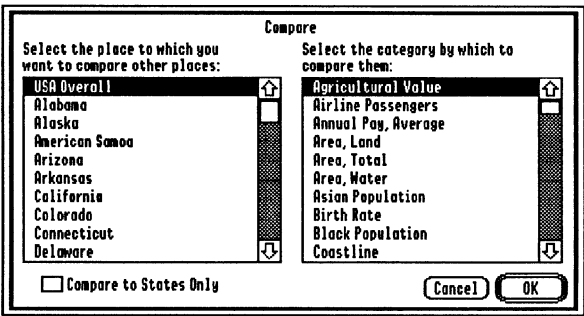


Figure 11



Step 2 Use the left-hand scroll box to choose "Arkansas" and the right-hand scroll box to choose "Population 1988." Then click OK.

A Step-by-Step Look at USA GeoGraph

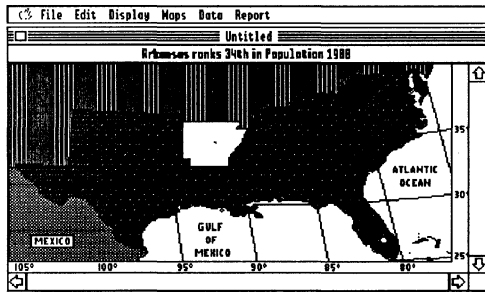


Figure 12

The dialog box disappears and the map of the South now appears in several colors (Figure 12). The information bar tells you how your comparison or “target” state, Arkansas, ranks in population, and Arkansas appears in orange on the map. But what do the other colors mean? Looks like you need a key again!

You know what to do, don’t you?

Step 3 Just in case you didn’t know what to do, choose “Show Key” from the Maps menu.



A key window appears, explaining that “red” states and territories have populations smaller than the target state, Arkansas, while “green” places have populations larger than the target state. In some cases, three other colors may be used as well. Places appearing in yellow would have populations—or whatever—equal to the target place. When a state or territory appears in white on a comparison screen, it means that no data is available for that place in that category. And places that appear in black are current database selections. You can see the “true color” of such a place by clicking elsewhere on the map.

But what happens if you try to pick a target place that doesn’t currently appear on the screen, such as Michigan? Let’s try it!

Step 4 Close the key window, pull down the Maps menu, and select “Compare” again.



Note that the settings in the comparison dialog box remain as you had set them before. Note also that a check box in the lower-left corner of the screen reads “Compare to States Only.” If this box is checked (by clicking in it) when you click “OK,” the program will consider only the states—and *not* the territories, such as the District of Columbia—when it determines the ranking described in the information bar. If any territories rank *higher* than your target state, the “States Only” option will affect the ranking of that state.

A Step-by-Step Look at USA GeoGraph



Incidentally, "Compare" is just one of several USA GeoGraph features that include a "States Only" option. In each case, implementing the "States Only" option may result in different outcomes than when you implement a command in the "ordinary" way, taking both states and territories into account.



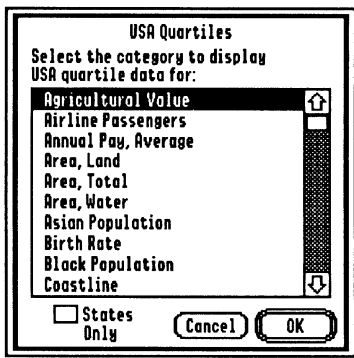
Step 5 Choose Michigan in the left-hand scroll box. Since "Population 1988" remains the selection in the right-hand scroll box, all you have to do now is click OK (or, if you prefer, "States Only").

The dialog box disappears and the map has been modified to reflect your changes. No place appears in orange because the new target state, Michigan, doesn't appear on this screen. But all the places in the South appear in one color or the other, depending on whether their populations are greater than or less than Michigan's. Also, note Michigan's ranking in the information bar.

Using the
"USA Quartiles"
command



Step 1 Now select "USA Quartiles" from the Maps menu.



A new dialog box appears (Figure 13) that allows you to choose the numeric category according to which you want to see U.S. quartile data displayed. A "quartile" is a block of 25%, so the "highest quartile" is the top 25%, the "second highest quartile" is the second 25%, and so on. If a place is among the lowest 25% of the nation's states or territories in terms of per capita income, it would be in the "lowest quartile" for that category.

Figure 13



Step 2 Select "Per Capita Income" and then click OK.

The quartiles map (Figure 14) has replaced the comparison map.

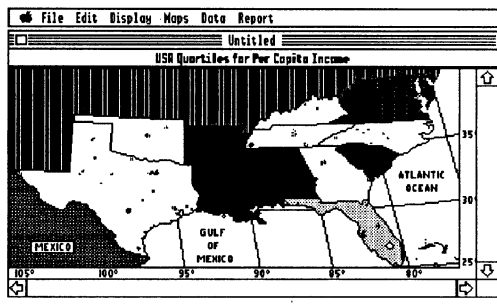


Figure 14

A Step-by-Step Look at *USA GeoGraph*

Now you see the map of the South appearing in different colors according to where each state or territory (the District of Columbia) stands in U.S. ranking for per capita income. Use the key to find out what the colors mean. It seems that, at least based on per capita income, some states in the South are quite a bit “richer” than others.

Step 3 Pull down the Maps menu and select “Fifty States Map.”

All fifty states are now “divided up” according to per capita income quartiles. Note how some states are so small that you can barely tell which quartile they fall into. If you wanted to see those states, you’d have to zoom in again to view them at the region level. But let’s not bother with that right now.

Step 4 Pull down the Maps menu and select “USA Quartiles” again. When the “USA Quartiles” dialog box appears, select a different category and then click OK.

Now you see the quartiles for the category you selected.

Step 5 We have some other things to do, so once you’ve finished experimenting with the quartiles, select “Blank Map” from the Maps menu.



Step 1 Select “Equal Steps Map” from the Maps menu.

The dialog box that now appears is virtually identical to the “USA Quartiles” box (see Figure 13 on page 18). And you use it in the same way. But it provides different results.

Step 2 Select “Per Capita Income” again and click OK.

Using the “Equal Steps Map” command

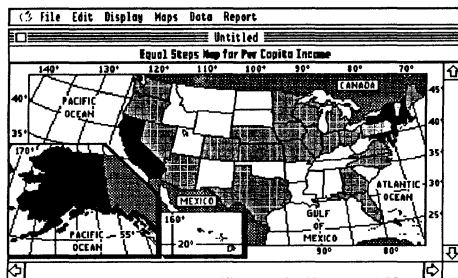


Figure 15

Once again, the map is divided into several different colors (Figure 15). But you may notice that, despite the fact you’re using the same data category, this “Equal Steps Map” is not at all identical to the quartiles map you saw a few moments ago!

A Step-by-Step Look at USA GeoGraph



Step 3 If the map key isn't currently on the screen, select "Show Key" from the Maps menu.

Like "USA Quartiles," "Equal Steps" divides the nation into four parts. In "USA Quartiles," each quartile is equal in size. Because we're dealing with fifty states and six territories—for a total of 56 places (unless you use the "States Only" option in the "USA Quartiles" dialog box)—each quartile has fourteen places in it ($56 \div 4 = 14$). The top fourteen are in the highest quartile, the next fourteen are next, and so on. But "Equal Steps" work differently.

"Equal Steps Map" takes the range of figures within a category and divides the *range* into four equal parts. The resulting map then indicates which places fall into each range. If states and territories fall equally across this range, then the sizes of the "equal steps" will also be equal. But if the distribution isn't even, then the equal steps won't be equal, either. The highest step may include many states, while the lowest may have only one or two. In fact, occasionally you may find that *no* states or territories fall into the middle steps. *Again, using "States Only" can drastically affect the outcome.*



Step 4 If you wish, do some "exploring" with the "Equal Steps Map" feature. You may wish to create and compare quartile and equal steps maps for various categories. Sometimes the two maps will be very similar, but at other times they will be extremely different.



Step 5 When you've finished experimenting with equal steps, select "Blank Map" from the Maps menu.

We're now going to "zoom in" a little more.

Working at the "close-up" level



Step 1 Select "Close-up Map" from the Maps menu.

The dialog box that appears contains a scroll box that allows you to find and select by name a place of your choice (Figure 16). This allows you to select a place to zoom in on, giving you an even closer look at a particular state or territory than you had at the region level.

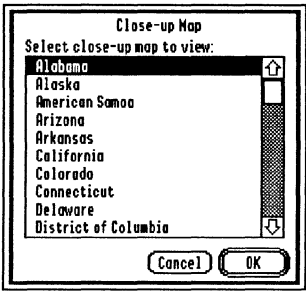


Figure 16

A Step-by-Step Look at USA GeoGraph

- Step 2** Scroll through the box until you find Puerto Rico. Then select it and click OK.

In this and most (but not all) scroll boxes in USA GeoGraph, typing a letter will cause you to scroll automatically to the first item in the list that begins with that letter. This also automatically selects that item, de-selecting anything you may have previously selected. For example, while viewing the "Close-up Map" scroll box, if you press the P Key, you will automatically scroll to and select "Pennsylvania." You could then click on Puerto Rico, which is right below it.

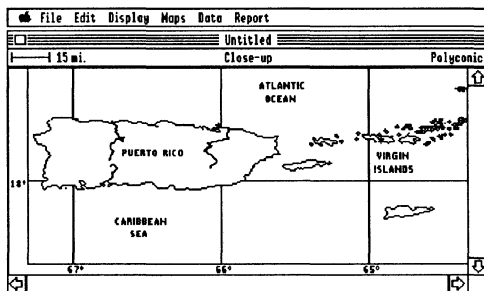


Figure 17

The screen now shows a zoomed-in view of Puerto Rico (Figure 17), which hadn't been visible on the Fifty States Map. Note how this close-up map also includes the Virgin Islands, which are located quite near Puerto Rico. And note that the *names* of these U.S. territories appear on the screen, which wasn't the case at the Overview, Fifty States, and region levels.

Now that we're at the close-up level, let's try some of our special map features.

- Step 3** Select "Compare" from the Maps menu and proceed as you had in "Using the 'Compare' Command" (beginning on page 16).

Sure enough, you can compare places at the close-up level, just as you can at the other levels. Similarly, the "USA Quartiles" and "Equal Steps Map" features also work at the close-up level. But "Theme Map" doesn't work at the close-up level. Remember—theme maps are available only at the Fifty States level.

Notice also that the "Hide/Show Boundaries" option is also grayed out on the Maps menu. At the close-up level, you're stuck with boundaries.



A Step-by-Step Look at USA GeoGraph

"Sliding" from one map to another



You may have already tried clicking your mouse on the adjacent "grayed-out" areas of some maps. But for those of you who haven't, we'll show you what happens right now.

Step 1 Use the "Close-up Map" command to look at the close-up map of Maine.

Two different types of "gray" appear on *USA GeoGraph* maps. The lighter, more "checkered" gray indicates other nations, such as Canada and Mexico. These areas aren't "active." In other words, clicking on them doesn't cause the map to "slide." On the close-up map of Maine (which also includes Vermont and New Hampshire), the upper-left and upper-right corners of the screen embrace Canada, which appears in this light gray color.

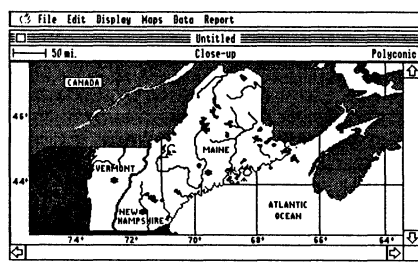


Figure 18

The other type of gray is darker, which indicates U.S. states or territories that are adjacent to the places being focused on in various region or close-up maps. In the lower-left corner of the Maine map you see an area colored in this dark gray (Figure 18).



Step 2 Click on the dark gray area and watch what happens.

Your map "slides" over to a different map *at the same level*. Since you were looking at a close-up map, you've slid over to the adjacent close-up map. If you had been looking at a region map, you would have slid over to an adjacent region map.

By clicking in gray areas on the close-up and region maps, you can "slide around the country," moving from map to map without using the Maps menu.

We're now ready to move on to the *USA GeoGraph* database. But you may say, "Wait! There's still one command on the Maps menu that you haven't discussed yet! What about the 'Contrast' command?"

A Step-by-Step Look at *USA GeoGraph*

No, we haven't forgotten "Contrast." But because it works in a manner quite similar to one of the core functions of the database, "Search," we're going to hold off on discussing "Contrast" until we've first described the "Search" feature. But if you're impatient, you may want to skip ahead to page 55 or to experiment on your own.

Meanwhile, let's see why we describe *USA GeoGraph* as a "living map."

As we've already noted, underlying *USA GeoGraph* is a unique "living map" concept, in which the on-screen maps are intimately linked to a detailed database. What you do to the map often affects the database and *vice versa*. Let's take a quick look at one way of using the "living map." But first make sure that you're looking at the Fifty States map on the screen. On the Display menu "Display Map" should be selected and on the Maps menu "Blank Map" should be selected.

Step 1 If the Fifty States map isn't currently displayed on the screen, select "Fifty States Map" from the Maps menu.

Step 2 Point the cursor at Alaska and click once.

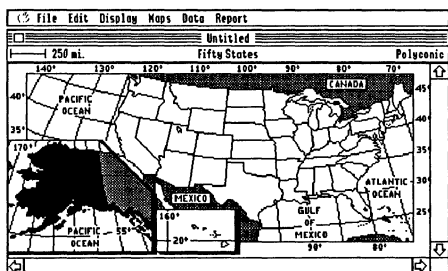


Figure 19

Alaska is now highlighted on the map (Figure 19). You have just "selected" Alaska. You'll find out how important that is in just a moment.

Keep this rule in mind: *Whenever you click on a state or territory, you select it.*

Step 3 Point the cursor at another state and click once.

Again, the state you clicked on is highlighted. Note, however, that Alaska is no longer highlighted. You have selected the other state, but in the process you have "de-selected" Alaska.

By simply clicking the mouse, you can select only one state or territory at a time.

Exploring the United States with the "living map"

Clicking on the map



A Step-by-Step Look at USA GeoGraph

Shift-clicking
on the map



Step 1

Hold down the Shift Key, point the cursor at Alaska, and click once. *This is called "shift-clicking."*

Alaska is highlighted once again. But the other state remains highlighted as well. By holding down the Shift Key when you click the mouse, you're able to select more than one state or territory at a time. Try it with a few additional states.

As long as you hold down the Shift Key, you can select as many states and/or territories as you wish. Note also that if you shift-click on an already-selected place, you de-select that place without de-selecting any other places.

Step 2

Stop holding down the Shift Key. Now, once again, simply click once on Alaska.

By releasing the Shift Key and clicking, you de-select all of the states you previously selected—except, of course, the one you were pointing at when you clicked the mouse.

Notice that double-clicking on a map has no special effect in USA GeoGraph.

Apple-clicking and
option-Apple-
clicking
on the map



Step 1

Hold down the Apple Key (⌘) and click anywhere in the western United States. *This is called "Apple-clicking."*



Figure 20

When you held down the Apple Key, your cursor changed to a "magnifying glass" with a *plus sign* in the "lens" (Figure 20). This tells you that you will "zoom in" on the map when you click the mouse.

And that's precisely what happened! You automatically zoomed in on the region-level map of the West (Figure 21). Notice, however, that no states in the West are highlighted.

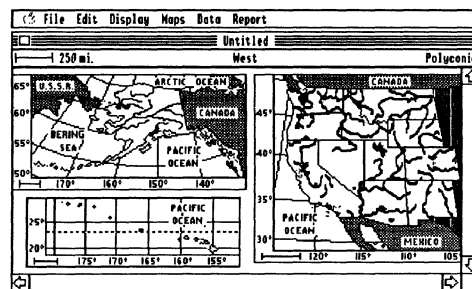


Figure 21

A Step-by-Step Look at USA GeoGraph

When you Apple-click on a state at the Fifty States level, you zoom in on the map of the region of which that state is a part without either selecting or de-selecting any state or territory.

Step 2 Hold down the Apple Key and click on California.

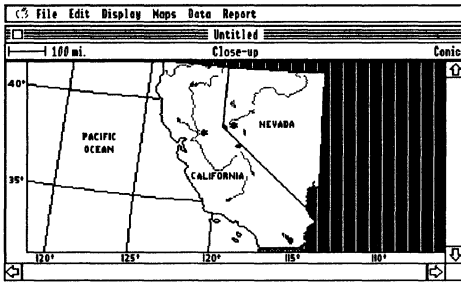


Figure 22

Now you zoom in on the California-Nevada close-up map (Figure 22). Again, no states are highlighted.

When you Apple-click on a state or territory at the region level, you zoom in on the close-up map for that state or territory without either selecting or de-selecting any place.

Step 3 Apple-click again on California or Nevada.

Nothing happens. There is no “closer” level of map to zoom in on, so Apple-clicking has no effect.

Step 4 Hold down the Apple and the Option Keys simultaneously and click anywhere on the close-up map of California and Nevada. This is called “option-Apple-clicking.”

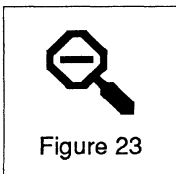


Figure 23

When you held down the Apple and Option Keys simultaneously, your cursor changed to a magnifying glass with a *minus sign* in the “lens” (Figure 23). This is a way of telling you that you will “zoom out” when you click the mouse.

And, sure enough, you’ve now “zoomed out” from the close-up map back to the region map of the West.

When you option-Apple-click on any state or territory at the close-up level, you zoom out to the map of the region of which that place is a part without either selecting or de-selecting any place.



A Step-by-Step Look at USA GeoGraph



Step 5 Again, hold down the Apple and the Option Keys simultaneously and click anywhere on the map of the West.

Now the Fifty States map reappears on the screen.



When you option-Apple-click on any state or on the District of Columbia at the region level, you zoom out to the Fifty States map without either selecting or de-selecting any place. If, however, you option-Apple-click on the Caribbean or Pacific region map, you zoom out to the Overview Map without either selecting or de-selecting any place.



Step 6 Option-Apple-click anywhere on the Fifty States map.

You now zoom out to the Overview Map.



When you option-Apple-click on any state or territory at the Fifty States level, you zoom out to the Overview Map without either selecting or de-selecting any place.



Step 7 Now option-Apple-click anywhere on the Overview Map.

Nothing happens. Because there is no “farther” level of map to zoom out to, option-shift-clicking has no effect. It doesn’t even select or de-select any state or territory because *use of the Apple Key on maps “deactivates” the ability of clicking to affect the selection process.*

Observing how the “living map” affects the database



Step 1 Zoom in again on the Fifty States map (Apple-click) and then, releasing the Apple Key, click on Texas to select it.

Texas should now be highlighted, indicating that it is the current selection.

A Step-by-Step Look at USA GeoGraph

- Step 2** Move the cursor up to the menu bar, pull down the Display menu, and select "Display Data Cards."

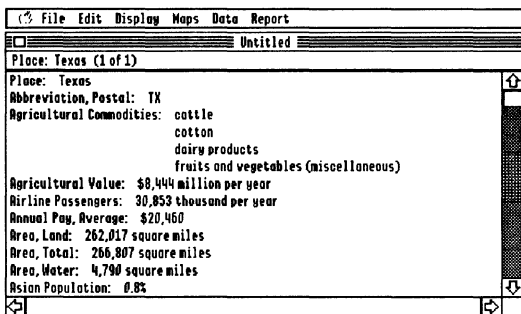


Figure 24

This is new! The map of the United States, with Texas highlighted, has disappeared, and in its place we see a list of data about Texas (Figure 24). By selecting "Display Data Cards" from the Display menu, you have gained access to the database. And because Texas was the only state selected when you entered the database, all you see here is information about Texas.



When you select a state or territory on a map by clicking on it, you are simultaneously selecting it in the database.



- Step 3** Take a few moments to scroll through the data card for Texas. (Use the scroll bar on the right-hand side of the screen to scroll through the card.) You should see a great variety of interesting information.



- Step 4** When you have finished examining the data for Texas, select "Display Map" from the Display menu.



Because it was the last map you were viewing, you return to the Fifty States map. Texas is highlighted because it's still selected.

- Step 5** Hold down the Shift Key and click on two additional states.

Now three states should be selected, indicated by the fact that they're highlighted on the map: Texas and the two additional states you clicked on.



A Step-by-Step Look at USA GeoGraph



If you wanted to, you could even go to a different map—say, of the Pacific territories—and select places there as well. As long as you hold down the Shift Key when you click the mouse, you can add states and territories to your selection without de-selecting places you have previously selected, even if they're not currently shown on the screen. It is only when you click without holding down the Shift Key that you "lose" your previous selections.



Also, note that clicking in the dark gray areas of a region or close-up map "slides" you to another map but does not affect the database selection. Clicking in a body of water, in another country, or on the latitude/longitude bars, however, will de-select all previous selections.



Step 6 Select "Display Data Table" from the Display menu.

You're back in the database, but you're looking at it in a new way. Instead of the data card, you're looking at a data table. Data cards list information in a vertical format, while tables list data both horizontally and vertically—horizontally for different information about the same place and vertically for different places.

Notice that you're seeing information about three states: Texas and the two additional states you selected.



You should now be getting a good idea of one of the ways in which the USA GeoGraph "living map" works. One method of manipulating the database is by manipulating the maps.

We'll explore other ways to take advantage of the "living map" concept later. But for now let's learn more about how the **USA GeoGraph** database works.

A Step-by-Step Look at *USA GeoGraph*

The *USA GeoGraph* database contains 105 categories of information about fifty states and six U.S. territories. And it has all of the searching and sorting capabilities you'd expect to find in a powerful database. Let's take a few minutes to learn how the *USA GeoGraph* database works.

Step 1 If you're not already looking at the data table (from the previous activity), go ahead and select "Display Data Table" from the Display menu. If you're not sure whether you're looking at the data table, simply pull down the Display menu and see whether "Display Data Table" has a check mark by it.

Step 2 Pull down the Data menu (Figure 25) and select "Clear Selection."

Data	
Clear Selection	⌘ Y
Search...	
Select Places...	
Find...	⌘ F
Find Next	⌘ J
Sort...	⌘ R
Show Categories...	
Arrange Categories...	
Resize Categories...	
Abbreviate Category Names	
Show English Units	⌘ E
Show Metric Units	⌘ U

Figure 25

Because we've already been manipulating the database through the use of *USA GeoGraph*'s "living map" capabilities, we should return the database to an "unselected" or "un-narrowed" state. The "Clear Selection" command allows you to do this, clearing the database (and, incidentally, the maps as well) of any selections you have made. So all of the states and territories in the database become "active" again! Now you can use the database without worrying about whether your actions will be restricted by previous activities.

Exploring the United States with the database

Using the "Clear Selection" command



As we've already noted, *USA GeoGraph* contains 105 categories of data. That's a lot of data to work with! In fact, it can get downright unwieldy! You might want to limit the number of data categories that appear on the screen. The *USA GeoGraph* "Show Categories" command lets you determine which categories will appear so that you won't have to bother with ones that you're not interested in at any given time. Of course, you can always go back and decide to show different categories later.

Step 1 If you haven't done so recently, select "Clear Selection" from the Data menu.

Step 2 Choose "Show Categories" from the Data menu.

Choosing which categories to view on the screen



A Step-by-Step Look at *USA GeoGraph*

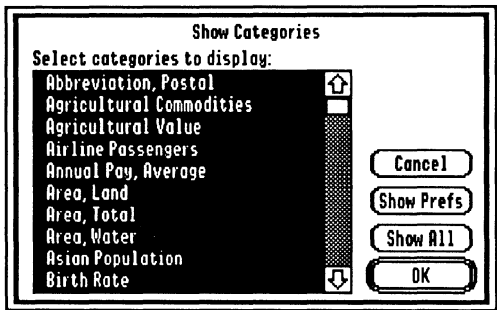


Figure 26

The “Show Categories” dialog box appears on the screen (Figure 26). Notice that all of the data categories are highlighted, indicating that they’re all “active.” The names of all the data categories are listed in alphabetical order.

The following is a list of these 105 categories, along with their units of measurement (if applicable):

<i>Data Category</i>	<i>Unit of Measurement (if applicable)</i>
Abbreviation, Postal	
Agricultural Commodities	
Agricultural Value	\$ million (millions of dollars) per year
Airline Passengers	thousands per year
Annual Pay, Average	\$ (dollars) per year
Area, Land	square miles or square kilometers
Area, Total	square miles or square kilometers
Area, Water	square miles or square kilometers
Asian Population	% (percent)
Birth Rate	per 1,000 population per year
Black Population	% (percent)
Borders	
Capital	
Cities	
Climate Zones	
Coastline	miles or kilometers
Crime, Property	per 1,000 population per year
Crime, Violent	per 1,000 population per year
Date of Admission	
Death Rate	per 1,000 population per year
Education, College	% (percent)
Education, Expenses per Pupil	\$ (dollars) per year
Education, High School	% (percent)
Education, Under 5 Years	% (percent)
Electoral Votes	

A Step-by-Step Look at *USA GeoGraph*

<i>Data Category</i>	<i>Unit of Measurement (if applicable)</i>
Electricity, Coal	% (percent)
Electricity, Gas	% (percent)
Electricity, Hydro	% (percent)
Electricity, Nuclear	% (percent)
Electricity, Petroleum	% (percent)
Elevation, Average	feet or meters
Elevation, Highest	feet or meters
Elevation, Lowest	feet or meters
Energy Consumption	trillions BTUs or millions megawatt-hours per year
Energy Consumption per Capita	millions BTUs or megawatt-hours per year
Energy Production	trillions BTUs or millions megawatt-hours per year
Energy Production per Capita	millions BTUs or megawatt-hours per year
Fun Facts	
Gross Domestic Product	\$ million (millions of dollars) per year
Ground Water Dependence	% (percent)
Hazardous Waste Production	thousands tons or thousands metric tons per year
Highway Mileage	miles or kilometers
Highway Usage	miles per mile per year or kilometers per kilometer per year
Hispanic Population	% (percent)
Industries	
Infant Mortality Rate	per 1,000 births per year
Labor Force, Female Participation	% (percent)
Labor Force, Male Participation	% (percent)
Labor Force in Agriculture	% (percent)
Labor Force in Industry	% (percent)
Labor Force in Office Work	% (percent)
Labor Force in Services	% (percent)
Land, Built-up	% (percent)
Land, Cropland	% (percent)
Land, Federal	% (percent)
Land, Forested	% (percent)
Land, Pasture	% (percent)
Land, Rangeland	% (percent)
Life Expectancy (Females)	years
Life Expectancy (Males)	years
Low-Income Families	% (percent)
Manufacturing Industries	

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A Step-by-Step Look at *USA GeoGraph*

<i>Data Category</i>	<i>Unit of Measurement (if applicable)</i>
Manufacturing Value	\$ million (millions of dollars) per year
Millionaires	per 100,000 population
Minerals and Fuels	
Minerals and Fuels Value	\$ million (millions of dollars) per year
Native American Population	% (percent)
Natural Features	
Natural Increase Rate	per 1,000 population per year
Net Migration, 1980-87	
Nitrogen Oxides	thousands tons or thousands metric tons per year
Particulates	thousands tons or thousands metric tons per year
Per Capita Income	\$ (dollars) per year
Place	
Political Index	rating (0 = "totally Democratic" and 100 = "totally Republican")
Population 1800	
Population 1850	
Population 1900	
Population 1950	
Population 1988	
Population 2000 (Projected)	
Population Age 65 and Over	% (percent)
Population Born Outside State	% (percent)
Population Density	people per square mile or square kilometer
Population Foreign-Born	% (percent)
Population Growth, 1980-87	
Population Growth Rate, 1980-87	% (percent)
Population per Physician	
Population Under Age 15	% (percent)
Precipitation, Annual Average	inches or millimeters
Recreation Lands	square miles or square kilometers
Region	
Soil Erosion	thousands tons or thousands metric tons per year
Status	"state" or "territory"
Sulfur Oxides	thousands tons or thousands metric tons per year
Temperature, January Average	°F or °C (degrees Fahrenheit or Celsius)
Temperature, July Average	°F or °C (degrees Fahrenheit or Celsius)
Toxic Waste Sites	

A Step-by-Step Look at USA GeoGraph

<i>Data Category</i>	<i>Unit of Measurement (if applicable)</i>
Unemployment Rate	% (percent)
Union Membership	% (percent)
Urban Population 1980	% (percent)
Urban Population Change 1970-80	% (percent)
Water Use for Irrigation	millions gallons or millions liters per day
Water Use per Capita	gallons or liters per day
White Population	% (percent)

- Step 3** In the "Show Categories" scroll box, select the category "Area, Total" by clicking on it.



If you wanted the "Area, Total" category to be the only one that appears on the screen, you would now click OK. But chances are that you'll want more than one category. *In fact, one category that you'll hardly ever want to do without is "Place."* After all, information about various states and territories won't do you much good if you don't know which places it relates to.

- Step 4** Scroll through the box until you find the "Place" category and then hold down the Apple Key when you click on it.



If you were merely to click on the word "Place," you would indeed select that category, but in so doing would de-select the "Area, Total" category. If you want to view *both* categories, you must Apple-click. *By Apple-clicking, you select an item without de-selecting any previous selections.*

You've selected both the "Area, Total" and the "Place" categories. If you wish to verify this, scroll back up to "Area, Total" to see whether it's still selected. If you Apple-clicked on "Place," it will be. Now, if you wish to view additional categories, you can do so by Apple-clicking on them as well.

Also, shift-clicking allows you to select a range of contiguous items. Simply click on the first item you wish to select and then shift-click on the last item you wish to select. Everything between and including the first and last items you clicked on are then selected.

A Step-by-Step Look at USA GeoGraph

If you select a category accidentally or if you change your mind about selecting it, Apple-clicking on a selected category de-selects it without de-selecting any other previously selected categories. Again, simply clicking (as opposed to Apple-clicking) on a category de-selects any other category that may have been previously selected.



Step 5 Once you've selected all the categories you wish to view, click OK.



Figure 27

You'd rarely want to view data without the "Place" category. That's why, if you try to exit from the "Show Categories" dialog box without having selected "Place," a special alert box appears (Figure 27).

This alert box warns that the "Place" category hasn't been selected and gives you two options. If you definitely don't want the names of the states and territories to appear on the screen, click the "Continue" button. But if you *do* want the names of the places to appear on the screen, click the "Add Place" button.



Note that by clicking on the "Continue" button in this alert box, you can indeed prevent the names of places from appearing on data tables. But the names of places always appear on data cards, whichever option you choose in this alert box.

After you click one of the buttons in this alert box, the "Show Categories" box disappears and you return to where you were in the program when you selected the "Show Categories" command.

What if you want to restore all of the data categories to view again?



Step 6 Select "Show Categories" again from the Data menu.

In the "Show Categories" dialog box that reappears, you'll notice—in addition to the standard "Cancel" and "OK" buttons—two other buttons: "Show Prefs" and "Show All." Don't worry about the "Show Prefs" button right now; we'll learn about that one later (in "Setting Preferences" on pages 94-96).

A Step-by-Step Look at *USA GeoGraph*

Step 7 Simply click the "Show All" button.

The result of clicking "Show All" is the same as if you had selected each and every category in the "Show Categories" scroll box and then clicked OK. You return to where you were before you had selected "Show Categories," but now with all of *USA GeoGraph*'s data categories in view once again.

Now, let's say you wanted to find an occurrence of a particular word in the database. For example, if you wanted to find "Florida" or "wheat," one way you might go about it is to use the "Find" and "Find Next" commands.



Step 1 Pull down the Data menu and select "Find."

The "Find" dialog box now appears (Figure 28). We're going to use it to find the first occurrence on the screen of the word "wheat."

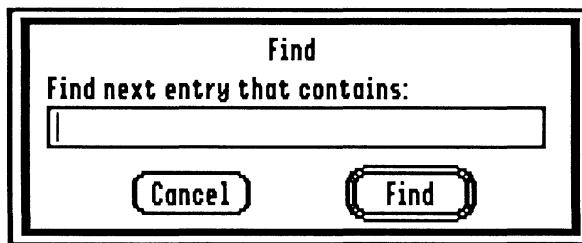


Figure 28

Note that the "Find" command works only on the current screen display. "Find" will not locate information in data categories and places not currently selected for viewing.

Using the "Find" and "Find Next" commands



Step 2 Type *wheat* and click "Find."



A Step-by-Step Look at USA GeoGraph

The “Find” box disappears and the screen “moves” to the first occurrence in the screen display of the word “wheat,” which “flashes” for a few seconds to call your attention to it (Figure 29). But in which place’s record does it appear? Right now you can’t tell because the screen has scrolled off to the side, away from the names of the states and territories. To identify this place, all you have to do is “zoom in” on the data card for that place.

File Edit Display Maps Data Report				
Untitled				
Agricultural Commodity	Agricultural Value	Airline Passengers	Annual Pay, Average	
sugarcane, pineapples	\$575	8,291	\$19	↑
cattle, dairy product	\$1,925	501	\$17	
corn, soybeans, hogs	\$6,888	19,344	\$22	
corn, hogs, soybeans	\$4,110	1,795	\$19	
hogs, corn, cattle, soybeans	\$9,106	737	\$17	
cattle, wheat, sorghum	\$5,425	633	\$18	
tobacco, horses, cattle	\$2,389	1,157	\$18	
soybeans, cotton, cattle	\$1,372	3,678	\$18	
dairy products, potatoes	\$365	448	\$17	
poultry, dairy products	\$1,186	2,297	\$21	
vegetables (miscellaneous)	\$423	8,045	\$22	
dairy products, corn	\$2,664	5,996	\$23	
dairy products, corn	\$6,874	6,062	\$20	↓

Figure 29



Step 3 Point at the item that flashed and *Apple-click* or *double-click* on it.

The name of the place now appears in the information bar at the top of the screen (Figure 30).

File Edit Display Maps Data Report	
Untitled	
Place: Kansas (19 of 50)	
Place: Kansas	
Abbreviation, Postal: KS	
Agricultural Commodities: cattle	
wheat	
sorghum	
corn	
Agricultural Value: \$5,425 million per year	
Airline Passengers: 633 thousand per year	
Annual Pay, Average: \$18,420	
Area, Land: 81,778 square miles	
Area, Total: 82,277 square miles	
Area, Water: 499 square miles	
Asian Population: 0.6%	

Figure 30

If you wanted to, you could *Apple-click* or *double-click* again to return to the data table. But for now let’s continue working with data cards. If you wish, you can scroll through them to examine data for various places. On the other hand, the “Find” process works as well in the data card format as it does in the table format.

A Step-by-Step Look at USA GeoGraph

To find the *next* occurrence of “wheat” in the database, you could use the “Find” command again. “Wheat” is still in the “Find” box, so you can click “Find” and thus look for “wheat” again. Or, if you prefer, you can enter something different to look for. But there’s an easier way to find the next occurrence of “wheat.”

Step 4 Pull down the Data menu and select “Find Next.”

No dialog box appears. The screen simply moves to the next occurrence of the word “wheat,” which again flashes momentarily.

If, on the other hand, you want to look for something *different*, you wouldn’t use “Find Next.” Instead, you’d use the “Find” command again. When the dialog box appears, you would either delete the last item you entered (by backspacing over it or using the Clear Key) or highlight it (by dragging over it or double-clicking on it). Then you would enter the new item you’re looking for.

You may be wondering whether the items you enter have to match the database entries *exactly* in order for the program to find them. What about capitalization, spaces, punctuation, fragments of words (such as the “Indiana” in “Indianapolis”), and the like?

You should be aware of the following guidelines for using the “Find” and “Find Next” commands:

- The “Find” and “Find Next” commands are *not* case-sensitive. If you enter *Texas*, *TEXAS*, *texas*, or *teXIs*, the program will find “Texas” in each case.
- The “Find” and “Find Next” commands *are* sensitive to punctuation *in text* but *not in numbers*. If you enter *kan,sas*, the program will *not* find “Kansas” because of the comma in your entry. If you enter *St Paul*, the program will not find “St. Paul” because you neglected to enter the period. But whether you enter *200000*, *200,000*, *2000,00*, or *20,0000*, the program will still find “200,000.”
- In numbers, everything except periods (decimal points), a minus sign (to indicate negative numbers), and the numerals themselves are ignored. In case you enter more than one decimal point, the right-most one (the last one you entered) is the “significant” one. Any other periods are ignored.



A Step-by-Step Look at USA GeoGraph



- An entry that contains any numeral is treated as if it were a number, not as if it were ordinary text. Therefore, if you enter \$2000 or 2000H, the program ignores the dollar sign or the H and just looks for “2000.”
- Spaces are treated like characters. If you enter a space, the program will look for a space. If you enter two spaces, the program will look for two spaces. For example, if you enter *North Dakota* or just *Dakota*, the program will find “North Dakota.” If, however, you enter *two* spaces instead of one between *North* and *Dakota*, the program will *not* find “North Dakota.” Nor will it find “North Dakota” if you enter *Da kota*. If you enter *North* with a space after it, the program will find “North Dakota” because it does indeed have space after it. But if you enter *Dakota* with a space after it, the program will *not* find “North Dakota.” Spaces entered before, after, or in the middle of *numbers*, however, are ignored.
- The “Find” and “Find Next” commands are *not* sensitive to diacritical marks. Unlike *World GeoGraph*, *USA GeoGraph* does *not* contain any database entries with diacritical marks. Nevertheless, if you enter a diacritical mark in a word that does *not* contain one in the database, the program will still find that word.
- The “Find” and “Find Next” commands *will* find words if you enter only fragments of those words. If you enter *Indiana*, the program will find “Indianapolis” as well as “Indiana” itself. And if you enter *Mon*, the program will indeed find “Montana”—but also “Montgomery,” “Richmond,” and any other word that contains either “Mon” or “mon” (because, remember, the program is not case-sensitive).

Notice that the “Find” and “Find Next” commands locate only *one* occurrence of an item at a time. And they don’t make any “selections,” narrowing the database down in any way. But what if you wanted to find *all* the occurrences of a particular item, though perhaps only within a certain category, while at the same time narrowing down the database to *only* those places that contain that item? That’s what the “Search” command is for.

A Step-by-Step Look at *USA GeoGraph*

Step 1 Select "Display Data Table" from the Display menu.

You don't have to be viewing a data table in order to use the "Search" command, but at this point it will be easier for you to observe the effects of using it if you're looking at a data table.

Step 2 Select "Search" from the Data menu.

The "Search" dialog box appears (Figure 31). As it says near the top of the screen, no "rules" are in effect. It's up to you to create a *search rule* for the program to use in narrowing down the database.

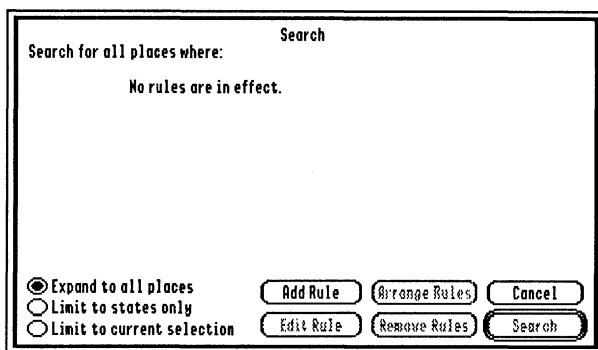


Figure 31

Step 3 Click on the "Add Rule" button at the bottom of the screen.

Now the "Add Rule" dialog box appears (Figure 32). Its scroll box and radio buttons will help you create your search rule. Let's narrow the database down to the states in the Northeast.

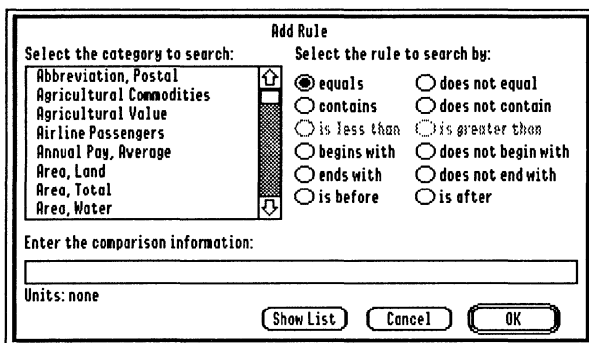


Figure 32

Conducting a simple search



A Step-by-Step Look at USA GeoGraph



Step 4 In the scroll box in the upper-left portion of the screen, scroll down until you find the word “Region” and click on it.

This scroll box allows you to choose the data category in which you want to search for a particular item.



Because the “Add Rule” dialog box includes text-entry capabilities (see Step 5), pressing a letter key will *not* take you to the first item in the scroll box beginning with that letter.



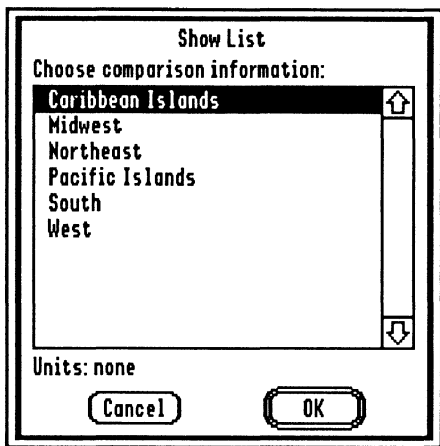
Step 5 Among the radio buttons in the upper-right part of the screen, click on the word “equals” (if it isn’t already selected).

These radio buttons allow you to determine the “equation” or “operator” relationship between the data category you select and the item that you want to search for. Notice that some radio buttons are grayed out. That’s because whether a particular radio button is active or not depends on the data category you select in the scroll box. The only radio button that is *always* active is “equals.”

Now you have the choice either of directly typing in the data you want to search for or of clicking the “Show List” button, which will display *another* scroll box from which you can select available items.



Step 6 Click the “Show List” button.



Another dialog box appears, featuring a scroll box that allows you to complete the “equation” by selecting the item that you want to search for (Figure 33). While the content of the first scroll box (the one you used to select the data category) is constant, this scroll box changes, depending on the item you selected in the first scroll box. Because you selected “Region” in the first scroll box, this scroll box contains a list of regions. If you had chosen another category, the content of this scroll box would have been different.

Figure 33

A Step-by-Step Look at *USA GeoGraph*

Step 7 Select the word “Northeast” by clicking on it and then click OK.

The “Add Rule” box reappears, with “Northeast” entered in the record comparison information box—just as it would have if you had typed it in yourself (Figure 34).



Figure 34

Step 8 Now that you've created your search rule, click OK.

The “Add Rule” box disappears and, in its place, you see the “Search” box again. But now, instead of reading “No rules are in effect,” the rule “Search for all places in which Region equals Northeast” has been established (Figure 35).



Figure 35

Let's see the results of putting this search rule into effect.

A Step-by-Step Look at *USA GeoGraph*



Step 9

Click the “Search” button at the bottom of the screen.

The “Search” box disappears and the data table reappears on the screen (Figure 36). But now, instead of including all of the places in the database, only the places in the Northeast appear. You’ve narrowed the database down to those places in which “Region equals Northeast.”

File	Edit	Display	Maps	Data	Report
Untitled					
Place	Abbreviation, Postal	Agricultural Commod	Agricultural Val		
Connecticut	CT	eggs, vegetables (mis		\$1	
Maine	ME	dairy products, potat		\$	
Massachusetts	MA	vegetables (miscella		\$	
New Hampshire	NH	dairy products, veget		\$	
New Jersey	NJ	vegetables (miscella		\$	
New York	NY	dairy products, veget		\$2	
Pennsylvania	PA	dairy products, cattl		\$3	
Rhode Island	RI	vegetables (miscella			
Vermont	VT	dairy products, cattl		\$	

Figure 36

You've just performed what is called a "simple search." *A simple search involves only one search rule.*

But there are other kinds of searches you can perform as well. Let's add a second rule to the one we've already established.

Conducting an "And" search

Step 1

Select “Search” again from the Data menu.

The “Search” box reappears. Note that the rule “Search for all places in which Region equals Northeast” is still in effect.



Step 2

Click on the “Add Rule” button.

The “Add Rule” box reappears. This time, let’s establish the rule “Population 1988 is greater than 5,000,000.”



Step 3

Look through the scroll box (if necessary) until you find “Population 1988.” Then select “Population 1988” by clicking on it.

A Step-by-Step Look at USA GeoGraph

Step 4 Select the “is greater than” radio button.

This time, instead of clicking “Show List” to choose from the available entries, let’s enter the record comparison information directly.

Step 5 Type 5,000,000 in the record comparison information box.

By the way, you don’t have to enter commas in large numbers if you don’t want to. *The entry “guidelines” that apply to the “Find” command (the shaded box on pages 37-38) apply to the “Search” command as well.* You should, however, be aware of the different database selections that can result from using the “equals” and “contains” operators (see page 124).

Step 6 Now that you’ve established your search rule, click OK.

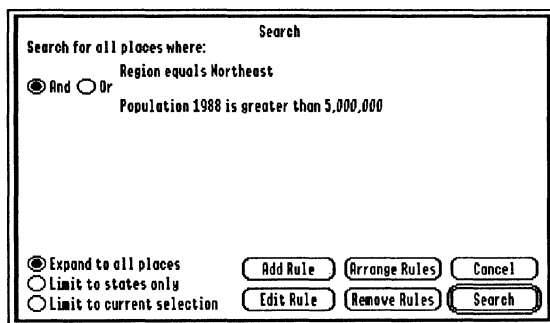


Figure 37

The “Add Rule” box disappears, replaced by the “Search” box.

Now “Population 1988 is greater than 5,000,000” appears as your second search rule (Figure 37).

Note that a pair of conjunctions, “And” and “Or,” have appeared between your two rules. Radio buttons allow you to choose the one you want. The default conjunction is “And,” so if “And” is what you want, you don’t have to do anything. In this case, “And” is indeed what we want.

By using “And,” we establish the following “compound” search rule: “Search for all places in which Region equals Northeast *and* Population 1988 is greater than 5,000,000.” The program will search for states that meet *both* criteria—not just one or the other.

Step 7 Click the “Search” button.

A Step-by-Step Look at *USA GeoGraph*

Conducting an "Or" search



The "Search" box disappears, replaced by the data table. Now your current database selection has been narrowed down even further, including only those states in which "Region equals Northeast" *and* "Population 1988 is greater than 5,000,000."

- Step 1** Select "Search" from the Data menu.
- Step 2** When the "Search" dialog box appears, click on the "Or" button between the two search rules.

Note that the "And" button automatically turned off when you clicked on the "Or" button. Each pair of "And" and "Or" buttons acts as a toggle switch. Only one can be turned on at a time.

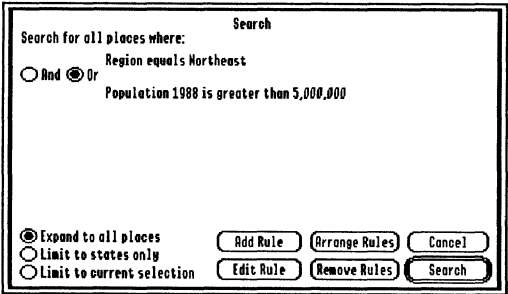


Figure 38

Your search rule now reads, "Search for all places in which Region equals Northeast *or* Population 1988 is greater than 5,000,000." But before you click the "Search" button, look at the three radio buttons near the bottom of the screen indicating "Expand to all places," "Limit to states only," and "Limit to current selection" (Figure 38).

If the "Expand to all places" button is selected, the program will ignore the results of any previous searches and search through the entire database in order to come up with the new database selection. If the "Limit to states only" button is selected, the program will search through *all* of the states but *only* the states, ignoring the six territories in the database. And if the "Limit to current selection" button is selected, the program will search only through the current database selection—no matter how narrow it is—in creating the new database selection. So the new selection cannot possibly be any larger than the previous one. Like "And" and "Or," these three buttons act as a toggle switch.

A Step-by-Step Look at USA GeoGraph

"Expand to all places" is the button we want. That's the default button, so you shouldn't have to do anything with it right now.

Step 3 Click on the "Search" button.

The "Search" box disappears, replaced by the data table. Your record selection has grown quite a bit, hasn't it? That's because you used an "Or" search. A place had to meet *only one criterion* to be part of the database selection, whereas with the "And" search, a place had to meet *both* criteria in order to be included. *But always remember that, whether you conduct an "And" or an "Or" search, your search criteria will only be applied to the current database selection unless the "Expand to all nations" or the "Limit to states only" button is selected near the bottom of the "Search" box.*

What happens if your search rules narrow the database down to no records at all—that is, if no places meet your criteria? In that case, you'll see an alert box that informs you that "Your search did not find any places." When you click OK in this box, the program returns to the "Search" screen, where you'll be able to change your rules. (See "Editing or Replacing Search Rules" on page 48.)

We've now seen three different kinds of searches: simple searches, "And" searches, and "Or" searches. But there's still a fourth type of search to consider—the most complex type of all.



Step 1 Select "Search" from the Data menu.

Step 2 When the "Search" box appears, click the "Add Rule" button.

Step 3 Establish the rule "Borders does not contain Ocean."

If you have difficulty doing this, go back and review the process used in establishing the two previous rules.

You'll need to type the word "Ocean" in the comparison information box.

Conducting searches that include both "And" and "Or"



A Step-by-Step Look at USA GeoGraph



Step 4

Once you've established the rule "Borders does not contain Ocean" (Figure 39), click OK.

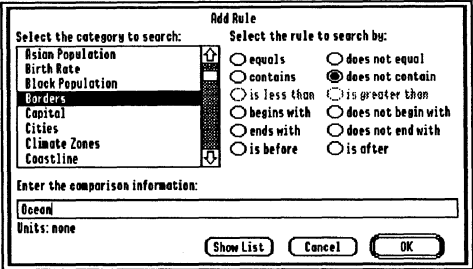


Figure 39

The "Add Rule" box disappears, replaced by the "Search" box. Now the search rule reads, "Search for all places in which Region equals Northeast *or* Population is greater than 5,000,000 *and* Borders does not contain Ocean."



Step 5

Change the first conjunction to "And" and the second conjunction to "Or."

Now your search rule should read, "Search for all places in which Region equals Northeast *and* Population is greater than 5,000,000 *or* Borders does not contain Ocean" (Figure 40). Also, check to make sure the active option near the bottom of the screen is "Expand to all places."

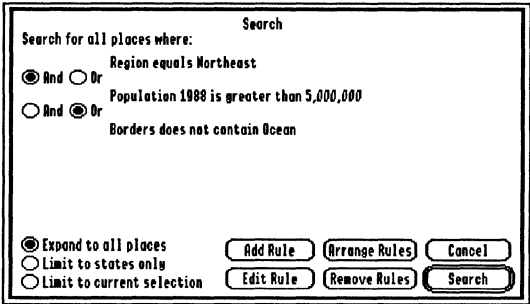


Figure 40



Step 6

Click the "Search" button.

A Step-by-Step Look at USA GeoGraph

The "Search" box disappears and the data table comes up. Use the scroll bars to look through it for a while. Notice that the current database selection includes *Northeastern states with 1988 populations over 5,000,000 plus any state or territory that does not border on an ocean*. But if a state or territory doesn't fit one of these two descriptions, it doesn't appear. Do you understand why this is the case?

Here's a very important rule to remember when using "And" and "Or" together in compound search rules: *"And" relationships take precedence*. In other words, the program groups together any rules linked by "And" before it takes other rules into consideration. So, because the "Search Rules" box read "Search for all places in which Region equals Northeast *and* Population 1988 is greater than 5,000,000 *or* Borders does not contain Ocean," the program *first* found all places that met *both* of the first two rules (which now more or less behave as a single rule) and *then added* all places that met the third rule.



Let's see what happens when we switch the "And" and the "Or" around.

- Step 7** Select "Search" from the Data menu again.
- Step 8** When the "Search" dialog box appears, click the "Or" button for the first conjunction and the "And" button for the second conjunction.
- Step 9** Click the "Search" button.



When the data table appears, you may notice that your record selection is a bit different this time. Now your current database selection includes *places with 1988 populations over 5,000,000 that do not border on an ocean plus all the states in the Northeast*. Do you see why this change occurred?

Again, the *"And" relationship took precedence*. The program first found all places that met *both* the second and third rule and *then added* all places that met the first rule.

Now, what if you want to change any of the search rules you've already created?

A Step-by-Step Look at *USA GeoGraph*

Editing or replacing search rules



- Step 1** Select "Search" from the Data menu.
- Step 2** When the "Search" dialog box appears, click on the "Edit Rule" button at the bottom of the screen.

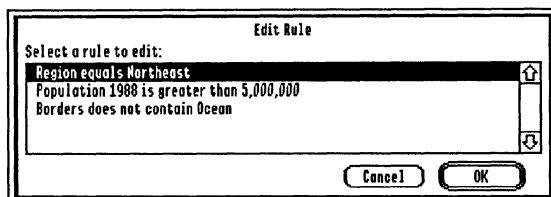


Figure 41

A dialog box now appears, allowing you to select the search rule that you wish to edit or replace (Figure 41). You can choose only one rule at a time to work with.



- Step 3** Select the rule "Population 1988 is greater than 5,000,000" and then click OK.

The "Edit Rule" dialog box, which is virtually identical to the "Add Rule" box, now appears. You can use this box just as you would "Add Rule," but in this case the newly created rule will replace your old rule with something different—either slightly modified or drastically changed, whichever you prefer.



- Step 4** Create the new rule "Population 1988 is less than 5,000,000" and then click OK.

The "Search" box reappears, looking just as it did before but with one difference: "Population 1988 is greater than 5,000,000" has been replaced by "Population 1988 is less than 5,000,000."

Removing search rules



Now, what if you want to get rid of a rule altogether?

- Step 1** At the bottom of the "Search" dialog box, click on the "Remove Rules" button.

The dialog box that appears is very similar to the one you saw when you clicked on "Edit Rule" (see Figure 41), except in this box you can choose more than one rule at a time by Apple-clicking.

A Step-by-Step Look at USA GeoGraph

- Step 2** Select the rules "Population 1988 is less than 5,000,000" and "Borders does not contain Ocean." Then click OK.

An alert box appears, asking whether you're sure that you want to remove those rules.

- Step 3** Click the "Yes" button.

The "Search" box returns, now with only the "Region equals Northeast" rule.

When you remove search rules, the conjunctions remain in their original order. After removing rules, you should examine the conjunctions to make sure that they conform to your wishes. If they don't, simply select the conjunctions you want between each rule.



There may be times when you'll want to rearrange the order of your search rules. For instance, if you've already created three rules and wish to add one more, the "Add Rule" button allows you to do so. Any rule you add at this point would come after your first three rules. But what if you want to link it by "And" to the very *first* rule? The easiest way to do this would be to use the "Arrange Rules" button in the "Search" dialog box. Let's try a simple procedure that demonstrates how "Arrange Rules" works.

Rearranging search rules

- Step 1** If the "Search" box isn't currently on the screen, select "Search" from the Data menu. If two or more rules aren't currently installed (for instance, if you've just now completed the previous activity, "Removing Search Rules"), go ahead and install several new rules.

- Step 2** Click on the "Arrange Rules" button.

The dialog box that appears is very similar to the one you saw when you clicked on "Edit Rule" or "Remove Rules" (see Figure 41).

- Step 3** Move the cursor up to the scroll box and notice what happens.

The cursor changes from the usual arrow to a "hand" (Figure 42) when it moves over this box.

- Step 4** Decide which rule you wish to move and then *click and hold down the mouse button* while pointing at that rule.



Figure 42



A Step-by-Step Look at USA GeoGraph

Note that the rule that you've "grabbed" in this way becomes highlighted in red.



Step 5 While still holding down the mouse button, "drag" the rule up or down to where you want it.



Step 6 When you've got the rule where you want it, release the mouse button.

When you release the mouse button, the rule is no longer highlighted in red.



Step 7 If you wish, repeat this process as often as you wish, rearranging the rules as you see fit.



Step 8 Once you've finished putting the rules in the order you prefer, click OK.

The "Arrange Rules" box disappears and the "Search" box reappears, now with the rules in their new order.



Again, note that the order of the conjunctions has not changed. After rearranging rules, you should closely examine the conjunctions to make sure that they conform to your wishes. If they don't, simply select the conjunctions you want between each rule.

Limiting searches to the current database selection

So far, the searches we've conducted were applied to the *entire* database. Now let's see what happens if you limit a search to the current database selection.



Step 1 Your current search rule should be "Region equals Northeast" (from the preceding activity). If you're not sure that this is the case, go ahead and use "Search" to establish this as your database selection.



Step 2 Select "Display Map" from the Display menu.

The data table is replaced by a map—whichever map you were last looking at. We want to see the Fifty States Map.

Step 3 If the map on the screen is not the Fifty States Map, select "Fifty States Map" from the Maps menu.

A Step-by-Step Look at USA GeoGraph

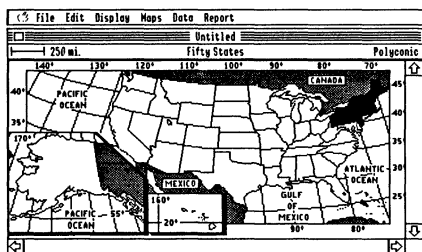


Figure 43

Notice how all of the Northeast is highlighted on the Fifty States Map (Figure 43). That's the *USA GeoGraph* "living map" in action again! The places that are part of the current database selection are always highlighted on the map.

Step 4 Click on Hawaii.

Notice that the Northeastern states are no longer highlighted. Instead, only Hawaii is highlighted (Figure 44). Hawaii is now the current database selection.

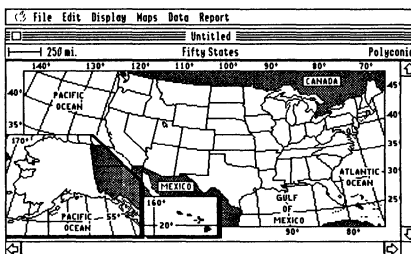


Figure 44

Step 5 Shift-click on Alaska and California.

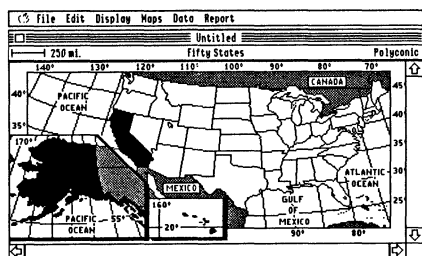


Figure 45

Because you shift-clicked, you were able to select Alaska and California without de-selecting Hawaii. So all three states should now be highlighted (Figure 45) and should comprise the current database selection. (You *did* shift-click, didn't you?)

Step 6 Now select "Display Data Table" from the Display menu.

The Fifty States Map is replaced by a data table, which includes only the records for Hawaii, Alaska, and California.

A Step-by-Step Look at USA GeoGraph



Step 7 Select "Search" from the Data menu.

When the "Search" box appears, you'll notice that your old search rule, "Region equals Northeast," is still in effect. *This is because the "Search" box is not necessarily a reflection of the current state of the database selection.* Rather, it is a *tool* through which you can manipulate the database. If you were to click on the "Search" button at this point, with "Expand to all places" as the selected option near the bottom of the screen, the places described by your old search rules would once again become the current database selection, replacing Hawaii, Alaska, and California. That way, if you accidentally "wipe out" your current database selection with a careless click on the map, you can easily restore it by using calling up the "Search" command again.

But let's *not* do that. Instead—



Step 8 Replace the old rule "Region equals Northeast" with a new rule, "Population 1988 is less than 1,000,000," and return to the "Search" box, *but don't click the "Search" button yet.*

If you don't remember how to replace a rule, you need to go back and review "Editing or Replacing Search Rules" on page 46.



Step 9 When you've created the new rule and returned to the "Search" box, select "Limit to current selection" near the bottom of the screen.

Your screen should now look like Figure 46.

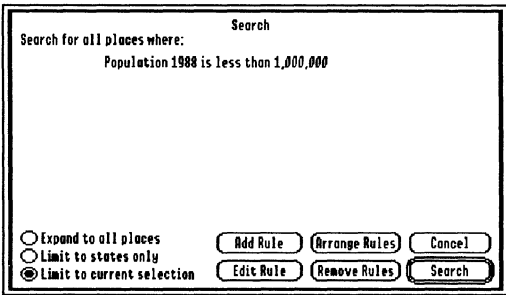


Figure 46

A Step-by-Step Look at *USA GeoGraph*

Step 10 Now click the “Search” button.

When the data table appears, you’ll see that only Alaska remains as the current database selection. This is because you’ve limited your search to the database selection of Hawaii, Alaska, and California. Of those three, only Alaska has a 1988 population of less than 1,000,000, so it became the sole entry in the current database selection.

If you hadn’t limited your search to the current database selection—using instead the “Expand to all places” option—the data table would have included *all* of the states and territories in the *entire database* with 1988 populations of less than 1,000,000.

That should give you a pretty good idea of how the *USA GeoGraph* “Search” command works. It’s now time to move on to some other useful database functions.



As you’ve learned, you can select places by clicking on the map. But what if you know the *name* of a state or territory you’re interested in but not its location on the map? Then, of course, you can use the search procedure, installing a rule like “Place equals Virgin Islands” to select that place. But (to complicate matters even more) what if you want to select a *number* of places—more than you *can* search for using the standard search procedure? In that case, you can use the “Select Places” command.

Selecting places by name

Step 1 Select “Clear Selection” from the Data menu.

This is just to ensure that you’ll be working with the *entire* database.

Step 2 Now choose “Select Places” from the Data menu.



A Step-by-Step Look at *USA GeoGraph*



Figure 47

The “Select Places” dialog box appears (Figure 47), allowing you to select as many places by name as you wish. Simply use the standard clicking procedures to select the states and/or territories you want to search for.



Step 3 Scroll through the box until you find “Guam” and then click on it.

Guam is now selected. Let’s add some other places to the selection. If you were to simply click on a different place, that state or territory would indeed be selected, but Guam would then be de-selected. So how do you select more than one place at a time?



Step 4 Apple-click on “Virgin Islands.”

Now both Guam and the Virgin Islands are selected.



As long as you hold down the Apple Key when you click in this box, you can add as many places to your database selection without de-selecting any previously selected ones.

You can also select a *range* of places. Let’s narrow the database down to only those places whose names start with “A”.



Step 5 Scroll up to the top of the box and click on the first place, “Alabama.”

Keep in mind by simply clicking on “Alabama,” you de-select your previous selections, Guam and the Virgin Islands. But that’s all right—we *want* to do that.

A Step-by-Step Look at *USA GeoGraph*

Step 6 Find Arkansas (the last place starting with "A") and shift-click on it.

Notice that all of the places between Alabama and Arkansas, inclusive, are now selected.

By holding down the Shift Key when you click in this scroll box, you select a range of places.

Step 7 Once you've selected all of the states and territories you want to work with, click OK.



If you recall, 'way back on page 23 we promised that we'd tell you about the Map menu's "Contrast" command after covering "Search." Well, a promise is a promise—

Step 1 If you're not currently looking at a map, select "Display Maps" from the Display menu.

Step 2 Select "Fifty States Map" from the Map menu.

Step 3 Select "Contrast" from the Maps menu.

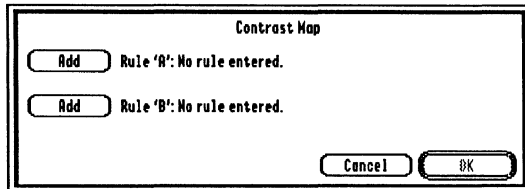


Figure 48

The dialog box that now appears (Figure 48) looks like a greatly simplified version of the "Search" dialog box. It allows you to create two search rules.

Using the "Contrast" command



With "Contrast," you can see displayed on a map all the states and/or territories that meet one rule, all that meet a second rule, and all that meet *both* rules. (And, of course, all that meet *neither* rule.) Yet you can do this without affecting the database itself. In other words, although "Contrast" employs a "Search"-like interface, it does not make any database selections in the way that "Search" does.

A Step-by-Step Look at *USA GeoGraph*



Step 4 In the “Contrast” dialog box, click on the “Add” button next to “Rule A.”

The next dialog box that appears should be pretty familiar by now. It's our old friend, the “Add Rule” box (see Figure 32 on page 39). Use it to create the rule “Black Population is greater than 10%.” (If you're not sure how to do this, you should review the “Search” instructions on pages 39-41.)



Step 5 When you've finished setting up the rule, click OK.

The “Contrast” box returns, with your search rule, “Black Population is greater than 10.0%,” appearing as Rule A.



Step 6 To set up your second rule, click on the “Add” button next to “Rule B.”

The “Edit Rule” dialog box reappears. This time, create the rule “Native American Population is greater than 1%.”



Step 7 When you've finished setting up your second rule, click OK.



Step 8 When the “Contrast” box returns, check to be sure that both rules are as you wish. Then click OK.

The Fifty States map reappears on the screen, now with several colors.



Step 9 Pull down the Maps menu and select “Show Key.”

As the key indicates, states without shading are those that match neither rule. States shaded light green are those that match Rule A, “Black Population is greater than 10.0%.” States shaded dark green match Rule B, “Native American Population is greater than 1.0%.” And one state—North Carolina—is shaded orange, indicating that it matches both rules. In other words, North Carolina is the only state in which the black population is greater than 10% of the total population *and* the Native American population is greater than 1%.

A Step-by-Step Look at USA GeoGraph

In short, “Contrast” allows you to compare and contrast states and territories in a way quite different from the “Compare” command. For one thing, “Contrast” enables you to use textual categories as well as numeric ones, whereas “Compare” is limited to numeric categories. And it allows you to create a map based upon an “and/or” search concept, yet *without affecting your database record selection*. Feel free to experiment with “Contrast” for a while, setting up sets of rules of your own. The results are often fascinating.

On the other hand, you may be ready to continue with our investigation of how the *USA GeoGraph* database works. Now that we’ve pretty much covered various kinds of search procedures, let’s see how to go about *sorting* the database.

Step 1 Select “Clear Selection” from the Data menu.

By using the “Clear Selection” command, you make the entire database readily available. When you now examine the data table, all of the states and territories in the database should appear.

Step 2 If you’re not already looking at a data table, select “Display Data Table” from the Display menu.

Step 3 Select “Sort” from the Data menu.

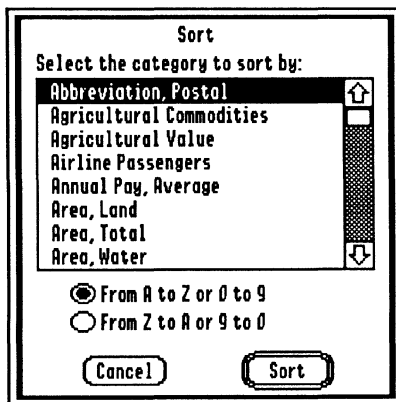


Figure 49

The “Sort” dialog box appears on the screen (Figure 49). The scroll box allows you to select the category according to which you want the database sorted. Radio buttons also allow you to determine whether the database records will be sorted “From A to Z or 0 to 9” or “From Z to A or 9 to 0.”

In short, the “Sort” command allows you to arrange the records in the database in alphabetical (A to Z), reverse-alphabetical (Z to A), numerical (0 to 9), or reverse-numerical (9 to 0) order according to the data within whichever category you choose.

Sorting a database record selection



A Step-by-Step Look at USA GeoGraph



- Step 4** Locate the "Population Density" category in the scroll box and then select it.
- Step 5** Select "From Z to A or 9 to 0" near the bottom of the dialog box.
- Step 6** Click on the "Sort" button.

Population Born Outs	Population Density	Population Foreign B	Population Growth
61.5%	9.841	8.4%	-16
43.5%	1.034	10.3%	307
no data available	952	no data available	85
32.5%	943	8.9%	39
55.0%	803	27.0%	9
28.3%	750	8.7%	118
42.2%	665	8.6%	104
no data available	622	no data available	24
46.0%	494	33.0%	6
46.3%	472	4.6%	319
30.7%	378	13.6%	267
48.4%	342	3.2%	50
18.4%	268	3.4%	72

Figure 50

When the data table reappears, notice that the order of the records has changed. If you scroll horizontally over to the "Population Density" category, you'll see that the database records are indeed organized in reverse-numerical order, with the place with the highest number—that is, the place with the greatest population density—appearing first (Figure 50).



- Step 7** Select "Search" from the Data menu, establish "Population Density is less than 30" as the only search rule, and begin the search.

If you don't remember how to do this, see "Conducting a Simple Search," beginning on page 39.

When the data table reappears, you'll notice that only those places with population densities of less than 30 (we'll discuss units of measurement in a moment) remain part of the database selection, but they're still organized in reverse-numerical order. The place with the greatest population density *less than 30* is listed first.



- Step 8** Select "Sort" again from the Data menu.
- Step 9** In the "Sort" dialog box, select the category "Place" and the order "From A to Z or 0 to 9."
- Step 10** Click on the "Sort" button.

The resulting data table still lists only those places with population densities of less than 30, but they're now listed in alphabetical order.

A Step-by-Step Look at *USA GeoGraph*

Keep in mind that the "Sort" command works on the current database selection, whether it's all of the places in the database or just two of them.

The "Sort" command is most useful for determining the rankings of places on the basis of numeric data, grouping places together on the basis of textual data, or simply arranging places alphabetically.

Note that one category, "Date of Admission," is neither numeric nor textual. Rather, it's chronological. When you sort the database according to date of admission, clicking on the "From A to Z or from 0 to 9" button will cause the database to be sorted from the earliest entry to the most recent. Clicking on the "From Z to A or from 9 to 0" button will cause it to be sorted in reverse-chronological order, from the most recent entry to the earliest.



Now, about those units of measurement—

There are 25 categories of data in *USA GeoGraph* that you can choose to express in either English or metric units of measurement:

Determining units of measurement

<i>Data Category</i>	<i>English Units</i>	<i>Metric Units</i>
Area, Land	square miles	square kilometers
Area, Total	square miles	square kilometers
Area, Water	square miles	square kilometers
Coastline	miles	kilometers
Elevation, Average	feet	meters
Elevation, Highest	feet	meters
Elevation, Lowest	feet	meters
Energy Consumption	trillions of BTUs	millions of megawatt-hours
Energy Consumption per Capita	millions of BTUs	megawatt-hours
Energy Production	trillions of BTUs	millions of megawatt-hours
Energy Production per Capita	millions of BTUs	megawatt-hours
Hazardous Waste Production	thousands of tons	thousands of metric tons
Highway Mileage	miles	kilometers

A Step-by-Step Look at USA GeoGraph

<i>Data Category</i>	<i>English Units</i>	<i>Metric Units</i>
Highway Usage	miles per mile	kilometers per kilometer
Nitrogen Oxides	thousands of tons	thousands of metric tons
Particulates	thousands of tons	thousands of metric tons
Population Density	people per square mile	people per square kilometer
Precipitation, Annual Average	inches	millimeters
Recreation Lands	square miles	square kilometers
Soil Erosion	thousands of tons	thousands of metric tons
Sulfur Oxides	thousands of tons	thousands of metric tons
Temperature, January Average	degrees Fahrenheit	degrees Celsius
Temperature, July Average	degrees Fahrenheit	degrees Celsius
Water Use for Irrigation	millions of gallons	millions of liters
Water Use Per Capita	gallons	liters

It's a simple matter to choose the system that you prefer to use.



Step 1 Select "Clear Selection" from the Data menu.



Step 2 Pull down the Data menu again and see which option is checked—"Show English Units" or "Show Metric Units."

The option with the check mark by it is the active option. In other words, if "Show English Units" has the check mark by it, then English units are currently in use in the 25 categories listed above.




Step 3 If you want to use the other option, simply select it.

The "Show English Units" and "Show Metric Units" options act as a toggle switch. Only one can be active at a time, so selecting one cancels the other.


A Step-by-Step Look at *USA GeoGraph*

Note that when you're using the data table format, units of measurement are always indicated in the column headings (Figure 51), but when you're using the data card format, they're always listed with the individual figures (Figure 52).



Area, Land (square miles)	Area, Total (square miles)	Area, Water (square miles)
63	69	6
7,468	7,787	319

Figure 51



Annual Pay, Average: \$23,840
Area, Land: 7,468 square miles
Area, Total: 7,787 square miles
Area, Water: 319 square miles
Asian Population: 1.4%
Birth Rate: 14.0 per 1,000 pop. per year

Figure 52

How about manipulating the order in which data appears on the screen—changing the order of the data categories on data cards and tables? The procedure is quite similar to that for rearranging search rules.

Step 1 If you're not currently viewing a data card, select "Display Data Cards" from the Display menu.

It actually isn't necessary for you to be viewing data cards when you arrange categories, but it *will* make the immediate results of the arranging process a bit clearer.

Step 2 Select "Arrange Categories" from the Data menu.

The "Arrange Categories" dialog box appears (Figure 53). It contains a scroll box that lists the names of the categories in their current order. Categories that you have chosen not to view through use of "Show Categories" are grayed out.

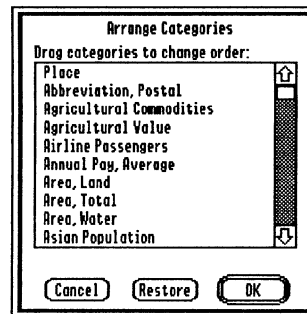


Figure 53

Arranging categories on data cards or tables



A Step-by-Step Look at USA GeoGraph



Step 3 Move the cursor up to the scroll box and notice what happens.

The cursor changes from the usual arrow to a hand (see Figure 42 on page 49) when it moves over this scroll box.



Step 4 Scroll through the box using the scroll bar. When you find the name of a category you'd like to move—"Population Per Physician," for example—*click and hold down the mouse button* while pointing at that category name.

Note that the name of the category you've "grabbed" in this way becomes highlighted in red.



Step 5 While still holding down the mouse button, "drag" the category name up or down to where you want it.

Notice how the box automatically scrolls when you reach its top or bottom edge, allowing you to move the category name to wherever you like.



Step 6 When you've got the category name where you want it, release the mouse button.

When you release the mouse button, the category name is no longer highlighted in red.



Step 7 If you wish, repeat this process as often as you wish, rearranging the categories as you see fit.

But if you look at the data card "behind" the dialog box, you may notice that it hasn't changed yet to reflect your rearrangement. That's all right. It *won't* change until you click OK to indicate that the entire process is complete.



Step 8 Once you've finished putting the data category names in the order you prefer, click OK.

The dialog box disappears and the data card on the screen is rearranged to reflect your changes in category order. If you wish, scroll through the card(s) to verify this fact.

The changes you made will be reflected in the data table as well as in the data cards.

A Step-by-Step Look at *USA GeoGraph*

Step 9 Pull down the Display menu and choose "Display Data Table."

The data table appears and, as you can see, the categories appear horizontally, from left to right, across the screen in the same order as they appeared vertically, from top to bottom, down the screen on your rearranged data card.

Keep in mind that you can rearrange data categories while you're viewing either data cards or a data table on the screen. Any changes you make in the order of categories will automatically be reflected in the other format (cards or table) when you next view that format.

*If you ever wish to restore the order of the categories to the way they were originally (when your copy of *USA GeoGraph* was first purchased)—which was with the "Place" category first and all subsequent categories in alphabetical order—select the "Arrange Categories" command and, instead of using the scroll box, simply click on the "Restore" button.*



You may also be wondering whether you can change the *width* of the columns in the data table.

Step 1 If you're not currently viewing a data table, select "Display Data Table" from the Display menu.

The command that allows you to change column widths, "Resize Categories," is active only when a data table is the current display on the screen. Otherwise, it's grayed out.

Step 2 Select "Resize Categories" from the Data menu.

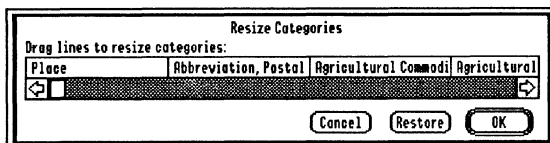


Figure 54

The dialog box that now appears allows you to change the width of data columns (Figure 54). It shows the column headings in their current order and width.

*Resizing
categories on
data tables*



A scroll bar allows you to "slide" across to additional headings.

A Step-by-Step Look at USA GeoGraph

Just as in the “Arrange Categories” box, the “Resize Categories” box shows categories not currently “active” for on-screen viewing as grayed-out headings.



- Step 3** Move the cursor up to the headings in the box and move it about. Notice what happens when the cursor is located at or very near the “border” between two headings.



Figure 55

The cursor changes from the “standard” arrow to a special “double-headed arrow” (Figure 55) when it moves near a line dividing two headings.



- Step 4** Look through the box using the scroll bar. When you find a category heading that you’d like to resize—“Minerals and Fuels,” for instance—*click and hold down the mouse button* while pointing at the “border line” *at the right-hand edge* of that heading.

Note that the heading you’ve “grabbed” in this way becomes outlined in red.



- Step 5** While still holding down the mouse button, “drag” the right-hand edge of the heading to the right or left until it has the width you want.

Dragging to the left makes the column smaller. Dragging to the right makes it larger. Note that there are maximum and minimum widths beyond which you cannot “stretch” or “compress” the column. *Any category that contains more information than can be easily viewed on a data table, no matter how wide you make the column, is best viewed with data cards.*



- Step 6** When you’ve got the category width as you want it, release the mouse button.

When you release the mouse button, the heading is no longer outlined in red.



- Step 7** If you wish, repeat this process as often as you wish, resizing the columns as you see fit.

A Step-by-Step Look at *USA GeoGraph*

But if you look at the table “behind” the dialog box, you may notice that it hasn’t changed to reflect your resizing of columns. It *won’t* change until you click OK to indicate that the process is complete.

Step 8 Once you’ve finished resizing the column headings, click OK.

The dialog box disappears and the columns in the data table on the screen are resized to reflect your changes. You may wish to scroll through the table to verify this fact.

If you resize a numeric category column in such a way that a large number is partially obscured, that number is replaced by asterisks. This is to prevent users from seeing part of a number and thinking that it is the whole number. If this occurs, it is best to go back and make that column wider to accommodate its largest number.

*If you want to restore the columns to their original width (as they were when your copy of **USA GeoGraph** was first purchased)—which was with each column taking up approximately one-quarter of the screen—select the “Resize Categories” command and, instead of using the scroll box, simply click on the “Restore” button.*

Keep in mind that any changes you make to a data table using “Resize Categories” have no effect whatsoever on data cards. Because they have no columns, column width is irrelevant to data cards.



The names of many of the data categories in *USA GeoGraph* are quite long—so long, in fact, that they often won’t fit conveniently in the headings of a data table! That’s why *USA GeoGraph* lets you abbreviate the category names in data tables.

*Abbreviating
category names
on data tables*

Step 1 If you’re not currently viewing a data table, select “Display Data Table” from the Display menu.

The command that you’re going to use next, “Abbreviate Category Names,” is grayed out and thus “inactive” unless you’re viewing a data table.

Step 2 Select “Abbreviate Category Names” from the Data menu.




A Step-by-Step Look at USA GeoGraph

When the data table reappears, you'll notice that it reflects this change. The headings across the top of the table are now greatly abbreviated. *If you wished, you could now use the "Resize Categories" command to decrease the width of the columns without obliterating the "uniqueness" of the headings.*

But as you examine the category abbreviations, you may be mystified by some of them. What does "EdHS" mean? What does "P15-" stand for? You need help!



Step 3 Select "Help" from the  (Apple) menu.

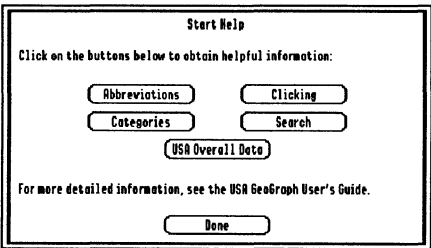


Figure 56

The "Help" dialog box now appears (Figure 56). Notice the various types of "help" provided. By clicking on the appropriate button, you can obtain information about "Abbreviations," "Categories," "Clicking," "Search," and "USA Overall Data."

Abbreviations—Tells what each category abbreviation stands for.

Categories—Briefly describes each data category.

Clicking—Describes the result of various clicking actions.

Search—Provides instructions for database search operations.

USA Overall Data—Provides information for the United States overall (as opposed to the database's state-by-state information).



Step 4 Click on the "Abbreviations" button.

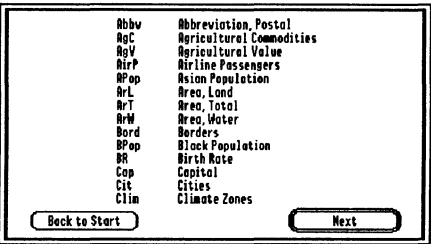


Figure 57

You now see an alphabetical list of the category abbreviations along with the full names of the categories they represent (Figure 57). *You can move from screen to screen, viewing the various abbreviations, by clicking on the "Next" button near the bottom of the screen.*

A Step-by-Step Look at *USA GeoGraph*

- Step 5** When you're finished examining the list of abbreviations, click on the "Back to Start" button.
- Step 6** Click on the "Done" button.
- The "Help" box disappears. Let's say you're now finished with the data table.
- Step 7** Select "Display Data Cards" from the Display menu.
- Because there's plenty of room on data cards for the full names of the data categories, the category abbreviations do *not* appear on the data cards. The *"Abbreviate Category Names" command affects only data tables.*
- Step 8** Select "Display Data Table" again.
- Note that the category abbreviations still appear on the data table. They will continue to appear on data tables—and *only* on data tables—until you "turn them off."
- Step 9** Pull down the Data menu and hold it for a moment without selecting anything.
- Notice that "Abbreviate Category Names" appears with a check mark next to it. The check mark indicates that the abbreviation feature is "on." The "Abbreviate Category Names" command functions as a toggle switch. When it's "off," selecting it will turn it on. When it's "on," selecting it will turn it off again.
- Step 10** Go ahead and select "Abbreviate Category Names."
- The data table reappears, now with the full category names (which may be partially obscured, depending on the current width of the columns). If you were not to pull down the Data menu again, you'd see that the check mark no longer appears next to "Abbreviate Category Names," indicate that it is now turned "off."



A Step-by-Step Look at *USA GeoGraph*

"Zooming in" on data for a particular place



Wouldn't it be nice if, while you were looking at a data table, there were a quick, easy way to "zoom in" on data for a particular state or territory? Well, we wouldn't ask that question if there weren't.

Step 1 Select "Display Data Table" from the Display menu.

Step 2 When the data table appears, point your cursor at any item within the record for any particular place—such as the name of the state or territory itself—and then Apple-click or double-click.

The data table disappears and is replaced by a data card for the place whose record you were pointing at when you Apple- or double-clicked.

When you Apple-click or double-click on a place within a data table, you "zoom in" on the data card for that place.

If you wish, you can now scroll through that card or to the cards for the other places in the current database selection.

Step 3 Now Apple-click or double-click anywhere on the data card.

The data card disappears and is replaced by the data table for the current database selection.

When you Apple-click or double-click on a data card, you "zoom out" to the data table for the current database selection.

*Note that option-Apple-clicking on a data table or card has exactly the same effect as Apple-clicking or double-clicking. No other variation on clicking with the mouse has any effect whatsoever on data tables or cards. Also, note that Apple-clicking or shift-clicking on a data table or card changes *only* your "view" of the data. It does *not* change the current database selection.*

So now you should know how the *USA GeoGraph* database and "living map" works. All of this may seem a bit overwhelming at first, but don't worry. As with any software, the more you use *USA GeoGraph*, the easier it gets. Before long, you'll be moving from one database function to another and from the map to the database and back again as if it were second nature. But we're not yet finished. There are still *more* features we haven't touched upon yet. Let's look at *USA GeoGraph's* *graphing* feature next.

A Step-by-Step Look at USA GeoGraph

USA GeoGraph lets you create graphs based on information in the database. Ordinarily, graphing can be an extremely tedious process. But with **USA GeoGraph**, it's a breeze.

Step 1 Select "Clear Selection" from the Data menu.

The program will create graphs for the current database selection only. If you want to see graphs for *all* of the states and territories in the database, you should use the "Clear Selection" command before doing anything else.

Step 2 Select "Display Graph" from the Display menu.

The "Graph" dialog box appears, allowing you to choose a data category to view in graph form (Figure 58). *Only numeric categories can be depicted in graph form, so those are the only categories listed in this box.* The categories are listed in alphabetical order. You can pick only one category at a time, so Apple- or shift-clicking has precisely the same effect as ordinary clicking.

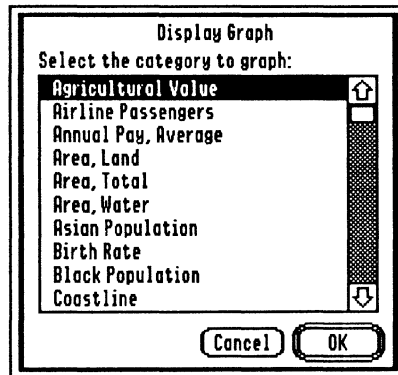


Figure 58

Step 3 Select "Birth Rate" and then click OK.

Exploring the United States with graphs

Creating a graph



A Step-by-Step Look at USA GeoGraph

The dialog box disappears and, within a few moments, the graph display screen appears (Figure 59). The information bar notes the type of data being graphed and the units involved.

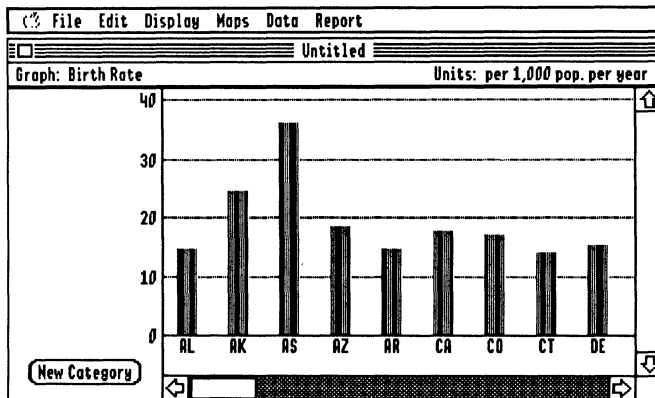


Figure 59

Because we had used "Clear Selection" before choosing "Display Graphs," birth rate data for all of the states and territories in the database has been graphed. But that's too many graphs to appear on one screen! So the scroll bars allow you to move horizontally or vertically, as necessary, to see all of the graphs.

On graph screens, the official two-letter U.S. postal abbreviations are used for the names of the states and territories. That's because there isn't enough room for the full names of most places. Most places can be readily identified from these abbreviations, but in case you have trouble understanding them, refer to the USA GeoGraph database category titled "Abbreviation, Postal."



Arranging graphs

What about the *order* in which the graphs appear? *That depends on how the data was last sorted when you were using the database.* If, for instance, you had last sorted on the basis of the "Precipitation, Annual Average" category, the "Birth Rate" graphs would appear on the screen in a *seemingly* nonsensical order. But that can be easily fixed.



Step 1 Select "Sort" from the Data menu.

A Step-by-Step Look at *USA GeoGraph*

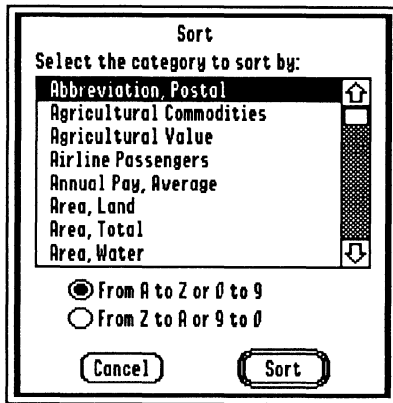


Figure 60

The "Sort" dialog box appears (Figure 60), allowing you to choose the category according to which you want the graphs arranged.

If you want the graphs to appear in alphabetical order as determined by the "Place" category, you should select "Place" and "From A to Z or 0 to 9." If you want the graphs to appear in ascending order on the basis of birth rate, you should select "Birth Rate" and "From A to Z or 0 to 9." And if you want the graphs to appear in descending order on the basis of birth rate, you should select "Birth Rate" and "From Z to A or 9 to 0." Let's try this latter option.

Step 2 Select "Birth Rate," click on the radio button for "From Z to A or 9 to 0," and then click the "Sort" button.



The "Sort" box disappears and, in a few moments, the graphs reappear, now arranged in the order you selected (Figure 61). Note how the graph format makes the descending order immediately apparent. This is one example of how graphs can convey and contrast numeric data with far greater impact than mere figures in a table.

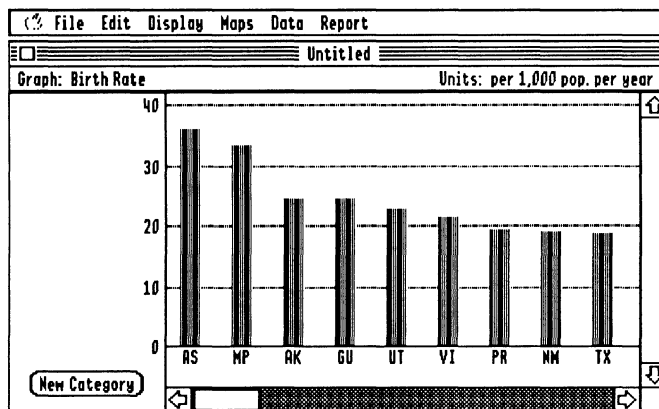


Figure 61

A Step-by-Step Look at *USA GeoGraph*

Applying the living map concept to graphs



- Step 1** Select "Display Map" from the Display menu.
- Step 2** If you're not currently viewing the Fifty States Map, select "Fifty States Map" from the Maps menu.
- Step 3** When the Fifty States Map appears, click on Alaska and then shift-click on the Texas so that both Alaska and Texas are highlighted (Figure 62).

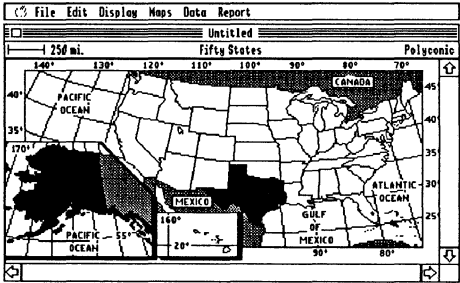


Figure 62

Alaska and Texas are now your current database selection, so any graphs you now create will pertain only to those two states.



- Step 4** Select "Display Graph" from the Display menu.
- Step 5** When the "Graph" box appears, select "Area, Total" and then click OK.

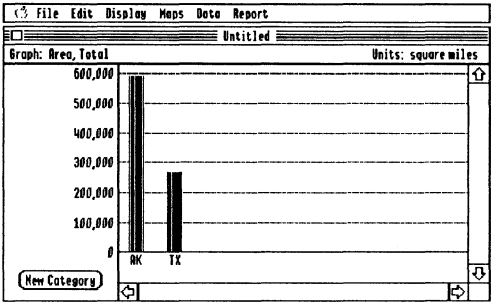


Figure 63

The box disappears, replaced by a simple pair of graphs comparing the area of Alaska to that of Texas (Figure 63). Without even looking at the figures, you can immediately tell that Alaska is more than twice as large as Texas.

Note that the scroll bars are inactive. Because you're only creating graphs for two states, there's nothing for you to scroll to!

A Step-by-Step Look at *USA GeoGraph*

Step 6 Click on “New Category” in the lower-left corner of the screen.

If you wanted to change the selection of *states* referred to in this graph, you could do so by using, for example, the “Search” command. But the “New Category” button gives you a quick, easy way to change the *data category* upon which the graph is based without having to go through the process of pulling down the Display menu and selecting “Display Graph” all over again—although if you wanted to, you could do that, too.



Step 7 When the “Graph” box appears, select “Population Density” and then click OK.

The new pair of graphs that appear allow you to quickly and easily compare the population densities of Alaska and Texas.



So that's a look at the graphing capabilities of *USA GeoGraph*. Feel free to experiment. On the other hand, you may now want to investigate the “Display Distribution” command, which no doubt you've noticed on the Display menu.

Perhaps you're curious about how “similar” or “different” the states and/or territories in your current database selection are. At your command, *USA GeoGraph* will automatically examine the records of a group of states and territories and report how entries are “distributed” among those places. If this isn't clear to you, don't worry—we'll explain.

As with graphing, *USA GeoGraph*'s “Display Distribution” feature works only with the current database selection. Also, “Display Distribution” works only with the data categories currently selected for viewing with the Data menu's “Show Categories” command. In this way, the program will concern itself with only the categories you're interested in. But if you're not sure what kinds of data matches you may find within a particular group of states and territories or if you have no particular category focus, you may want to use “Show Categories” to be sure that *all* of the data categories are “active.” The primary disadvantage to viewing all of the categories while using this feature is the “unwieldiness” of the resulting distribution tables. That is, it provides so much information that it can be intimidating. Still, *you* are the best judge of how many categories you should view simultaneously while using the “Display Distribution” feature.

Exploring data distribution

A Step-by-Step Look at USA GeoGraph

Now, let's see how "Display Distribution" works.



Step 1 Looking at the Fifty States Map, either click/shift-click on all the states in the South or pull down the Data menu and use "Search" to create and implement the rule "Search for all records in which Region equals South."

In short, narrow down the database to the Southern states.



Step 2 Select "Display Data Cards" from the Display menu.

This is simply to activate the "Show Categories" option so that you can perform the next step.



Step 3 Pull down the Data menu and use "Show Categories" and Apple-clicking to select the following ten categories for viewing:

<i>Agricultural Commodities</i>	<i>Per Capita Income</i>
<i>Black Population</i>	<i>Place</i>
<i>Capital</i>	<i>Precipitation, Annual Average</i>
<i>Education Expenses Per Pupil</i>	<i>Region</i>
<i>Education, College</i>	<i>Temperature, January Average</i>

For the time being, working with this relatively small number of states and categories will make it easier to show you how *USA GeoGraph*'s distribution analysis feature works.



Step 4 Pull down the Display menu and select "Display Distribution."

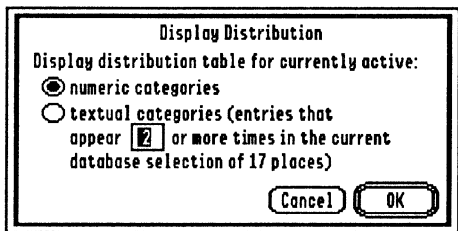


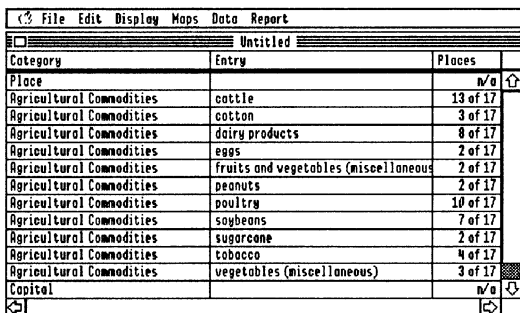
Figure 64

The "Display Distribution" dialog box appears (Figure 64), allowing you to choose whether you want to see the textual or numeric categories within your currently "active" set of data categories. "Display Distribution" cannot work simultaneously with both textual and numeric categories. You must choose between them.

A Step-by-Step Look at USA GeoGraph

If you choose to work with textual categories, you can also designate the minimum number of times an entry must appear in a category for it to be reported. You may enter any number from 1 to 99. *The default setting is 2.*

Step 5 Click on the “textual categories” button and leave the “number of appearances” setting at its default value, 2. Then click OK.



Category	Entry	Places
Place		n/a
Agricultural Commodities	cattle	13 of 17
Agricultural Commodities	cotton	3 of 17
Agricultural Commodities	dairy products	8 of 17
Agricultural Commodities	eggs	2 of 17
Agricultural Commodities	fruits and vegetables (miscellaneous)	2 of 17
Agricultural Commodities	peanuts	2 of 17
Agricultural Commodities	poultry	10 of 17
Agricultural Commodities	soybeans	7 of 17
Agricultural Commodities	sugarcane	2 of 17
Agricultural Commodities	tobacco	4 of 17
Agricultural Commodities	vegetables (miscellaneous)	3 of 17
Capital		n/a

Figure 65

The dialog box disappears and the textual distribution table appears (Figure 65). Of the ten “active” data categories, four are textual: “Place,” “Agricultural Commodities,” “Capital,” and “Region.” But note that, for “Place” and “Capital,” “n/a” (“not applicable”) is listed because those categories consist entirely of unique entries.

Keep in mind that, in distribution tables, three textual categories (“Capital,” “Cities,” and “Place”) always list “n/a” because they consist solely of unique entries.

If no “matches” are found in any other “active” textual category, the line following the name of that category is left blank.

The categories are listed in their current database order, which you can change, if you wish, by using the “Arrange Categories” command. The scroll bar on the right side of the screen allows you to scroll up and down to see the entire table.

For “Agricultural Commodities” (which lists four agricultural products that are among the most important to a state’s economy), the program reports that the item “cattle” appears for thirteen of the seventeen states in the South, that “cotton” appears for three of them, that “dairy products” appears for eight of them, and so on. Note that the table *doesn’t provide the names* of the states in which these matches occur—only the number of matching entries.

A Step-by-Step Look at *USA GeoGraph*

Also note that items appearing only once in a category within the current database selection are not reported because you used the default setting of two or more appearances. In this case, the textual distribution category only reports items that appear at least twice.

Note that the distribution analysis reports that all seventeen of the selected states list “South” in the “Region” category. This is, of course, to be expected since the search criterion for selecting these states was “Region equals South.”

Now let's look at those numeric categories.



Step 6 Pick “Display Distribution” from the Display menu once again.

The “Display Distribution” box returns.

Step 7 Click on the “numeric categories” button and then click OK.

[illegible]

Figure 66

The dialog box disappears and, after the program completes its analysis, the numeric distribution table appears on the screen (Figure 66). As you can see, it's quite different from the textual distribution table. Rather than look for exact matches as it does for textual data, the program reports where the numeric data for the current database selection falls within U.S. deciles for each "active" category.

These U.S. deciles are similar to the quartiles used for the “USA Quartiles” maps, except instead of dividing sets of data into four equal parts, it divides data into *ten* equal parts.

A Step-by-Step Look at *USA GeoGraph*

Look at the “Black Population” category. The table reports that of the seventeen places in the current database selection, five of them rank in the highest U.S. decile for black population, five rank in the second-highest U.S. decile, three in the next-highest, and so on.

Note that while the program is reporting on the decile placement of only seventeen states, it considers the entire United States in creating those deciles in the first place.

As you can see, the table simultaneously reports the program's findings for the other five “active” numeric categories as well.

Note that, in most cases, a numeric distribution table is informative only if your current database selection is relatively small—that is, less than the entire selection of fifty states and six territories.

Because the distribution feature for numeric categories works with U.S. deciles, all you'll see on a table that embraces all or most of the United States is an even distribution of the states and territories across the ten deciles. To get the most out of “Display Distribution” in numeric categories, be sure that the database has already been narrowed or restricted in some way.



Step 8 To exit from the numeric distribution table (or from the textual distribution table, for that matter), simply choose whichever other option from the Display menu you prefer, such as “Display Map.”



Now, you may be thinking that this “Display Distribution” feature is very interesting, but what *good* is it? Well, it serves as a very convenient aid in searching for patterns among states. In our example of the Southern states, you know that the states in the current database selection have at least *that* much (being in the South) in common. If you then were to use “Display Distribution” to discover other correlations—such as the frequent appearance of a certain type of agricultural commodity or an unusually large number of these states appearing within the lowest deciles of the college education category—you'd have evidence of some potentially meaningful patterns. Because apparent correlations can be “accidental” as well as meaningful, it would be a mistake to jump to any conclusions. But such “preliminary” findings can provide valuable “jumping-off points” for further research and discussion, which may even lead to more definitive conclusions.

By now you've gone through many different activities with *USA GeoGraph*. Maybe you've felt frustrated that you haven't been able to save and print out the fruits of your labors. But you *can* save and print the results of your work with *USA GeoGraph*! That's what comes next.

A Step-by-Step Look at USA GeoGraph

Creating reports

Anything that you do with *USA GeoGraph*—any map, data table, set of data cards, set of graphs, or distribution table that appears on the screen—can be saved and printed out. You do this by creating a “report.”

Adding a section to your report



Step 1 If you're not viewing the Fifty States Map already, select “Display Maps” from the Display menu (if necessary) and then “Fifty States Map” from the Maps menu.

Step 2 Use “Search” to create the rule “Region equals West.” Then conduct the search.

The Western States should now be highlighted as your current database selection.



Step 3 Pull down the Report menu (Figure 67) and select “Add Section.”

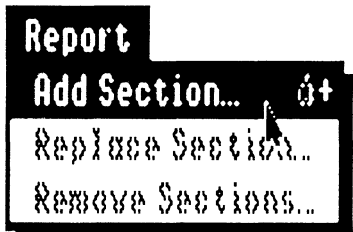


Figure 67

You might wonder, “Add section? Add a section of *what* to *what*?” But the first step in *creating* a report is to create a “section” of that report, which is done with the “Add Section” command. Whatever was on the screen when you selected “Add Section” is going to be the first section in your report.



Think of a “section” as a specific moment in the history of your use of USA GeoGraph. It’s a way of “saving” a certain map, data table, or something else that you’ve created that you might want to print out or come back to later.

At any rate, when you select “Add Section” from the Report menu, the “Add Section” dialog box appears (Figure 68).

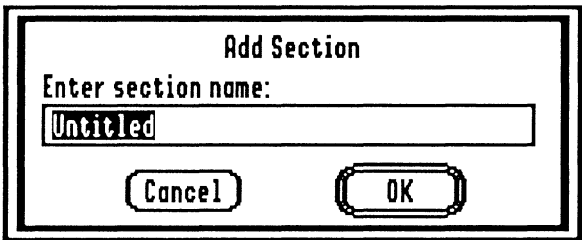


Figure 68

A Step-by-Step Look at *USA GeoGraph*

- Step 4** Enter a title for the first section of your report. (This title can consist of no more than twenty characters.)

Your title should be clear and accurate so that you'll know exactly what it refers to. Something like "West Selected" would do nicely.

- Step 5** Click OK.

The dialog box disappears and you're right back to the screen you were looking at before you used the "Add Section" command. What happened?

- Step 6** Pull down the Report menu but "hold" it for a moment, without selecting anything.

Note that the title of your new report section has been added to the end of the Report menu (Figure 69). This menu grows in length as you add sections to your report. In a few minutes you'll see what happens when you select a title from this menu. But let's first add some more sections to the report.



Figure 69

- Step 7** Select "Theme Map" from the Maps menu.

- Step 8** When the "Theme Map" dialog box appears, select "Physiographic Regions" and then click OK.



A Step-by-Step Look at USA GeoGraph

The “Physiographic Regions” map now appears on the screen. If you wish, select “Show Key” from the Maps menu to see what the various colors mean. Notice, however, that the Western States are still highlighted because they’re still the current database selection. If you wish to see the physiographic regions in the West, you can choose the “Clear Selection” command, which eliminates the highlighting so that the screen will resemble Figure 70. Choosing “Undo” from the Edit menu immediately afterward will restore the West as your database selection.

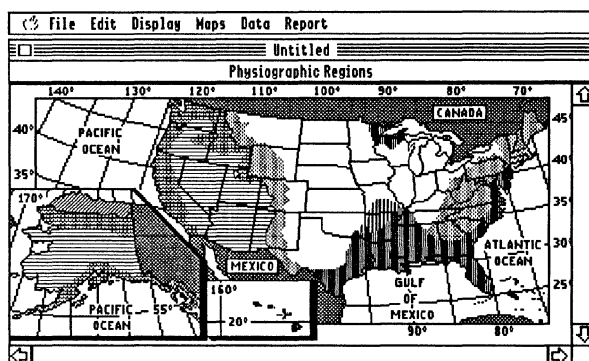


Figure 70

- Step 9 Select “Add Section” again from the Report menu.
- Step 10 Follow the same procedure as you did before (see Steps 4 and 5 on page 79) to assign a title to this new section and to add it to your report.
- Step 11 Create and add several more sections to your report, up to the maximum of ten. You can add whatever kinds of sections you like—theme, comparison, contrast, quartile, or equal steps maps, data tables, data cards, graphs, whatever. *Explore!*

But here’s an important point: “Sections” consist of entire current selections, not just what appears on the screen at any one time. In other words, if you select “Add Section” while you’re viewing a data card on the screen, the entire set of data cards becomes your new section, not just the one card you were viewing. If you add a section while you’re viewing a data table, the entire table becomes the new section, not just that portion of it that appeared on the screen. The same is true of sets of graphs and distribution tables.

A Step-by-Step Look at *USA GeoGraph*

After you've added a number of sections to your report, you may want to go back and look over what you've created.

- Step 1** Pull down the Report menu and select "West Selected" (or whatever you called your first section).

The section that you selected now appears on the screen. In a manner of speaking, you've "gone back in time" to when you created this report section, although any other report sections you created since then are still "saved." At this point you may proceed to use *USA GeoGraph* as usual, changing the screen, performing other activities, or creating other reports as you see fit.

- Step 2** Perform any simple action that will change the screen, such as selecting a different type of display (going from maps to data or *vice versa*).

- Step 3** Now pull down the Report menu and select the same section title that you chose in Step 1.

That same report section reappears, just as it did after you completed Step 1—*unchanged!* Once again, you've "gone back in time" to when this section was first created. So this section truly *is* "saved."

But what if you want to change one of your report sections so that when you select it from the Report menu, the "new, improved version" appears?

Viewing a section of your report



- Step 1** Select from the Report menu a section of the report that you want to change.

Step 1 isn't really necessary, as you'll see in Step 3. But if you want to make relatively *minor* changes to a report section, it's probably easiest to start with that section.

- Step 2** When the report section appears, go ahead and make whatever changes you like.

For instance, change it from a map to a data table or from a comparison map to a quartiles map, or change your current database selection.

Replacing a section of your report



A Step-by-Step Look at *USA GeoGraph*



Step 3 Select "Replace Section" from the Report menu.

The "Replace Section" dialog box appears (Figure 71).

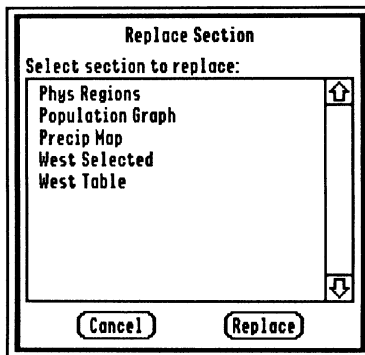


Figure 71



Step 4 Select the title of the report section that you want to replace with your "revision" and then click the "Replace" button.

Another dialog box appears, asking you to give your new section a name. You have the option of keeping the name of the section that's being replaced, but let's not do that right now.



Step 5 Enter a new name for your new report section and then click OK.

The dialog box disappears and your screen looks as it did before you selected the "Replace Section" command. If you were to pull down the Report menu now, you would notice that the report section that you wanted to replace is indeed replaced by a new section.

As noted just after Step 1, *you don't even have to first select a report section in order to replace it.* You can select "Replace Section" at any time after you've created at least one report section. Then you would simply follow Steps 3-5 in order to replace any of your existing report sections with whatever was on your screen when you selected the "Replace Section" command.

What if you want to remove a section altogether, not replacing it with anything?

A Step-by-Step Look at *USA GeoGraph*

- Step 1** Select "Remove Sections" from the Report menu.

The "Remove Sections" dialog box appears (Figure 72).

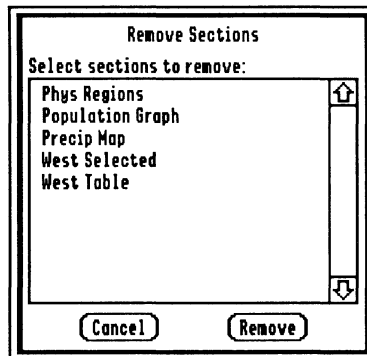


Figure 72

- Step 2** Select the title of the section that you want to remove from the report and then click the "Remove" button. If you wish, you can use Apple- or shift-clicking to remove more than one section from the report simultaneously.

After you click "Remove," an alert box appears, asking whether you're sure that you want to remove those report sections.

- Step 3** Click on the "Yes" or "No" button, whichever you prefer.

Now that you've created your report, you may want to do some printing.

Removing a section of your report



USA GeoGraph allows you to print two different things: reports (all or in part) and windows. Let's see how you'd go about printing a report.

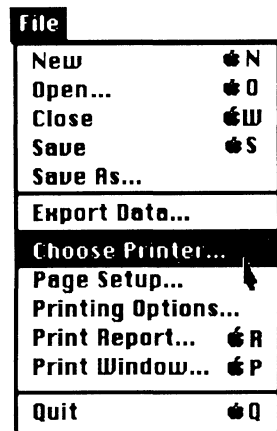


Figure 73

You won't have to go through *all* of the following steps every time you want to print a report. Once you go through this procedure, the settings you establish will remain in effect until you change them. *But the first time you use USA GeoGraph, all or most of these steps will be necessary.*

- Step 1** Select "Choose Printer" from the File menu (Figure 73).

Printing

Printing a report



A Step-by-Step Look at *USA GeoGraph*



Step 2 Make the appropriate choices in the “Choose Printer” box and then click OK.

If you have difficulty with your printer or are unsure how to use it, see your Apple IIGs and/or printer instruction manuals.

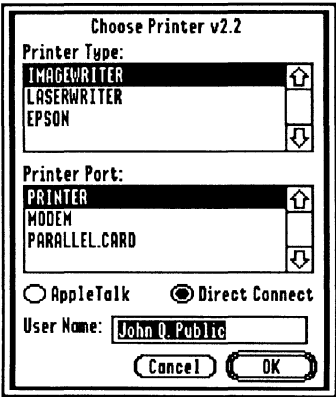


Figure 74



Step 3 Select “Page Setup” from the File menu.

The “Page Setup” dialog box appears (Figure 75 if you chose “LaserWriter” in Step 2; Figure 76 if you chose “ImageWriter”). The printer and printer port that you had designated with the “Choose Printer” box are listed at the top of the “Page Setup” box.

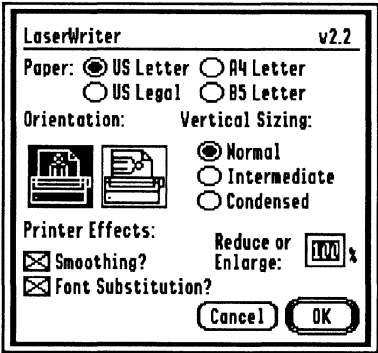


Figure 75

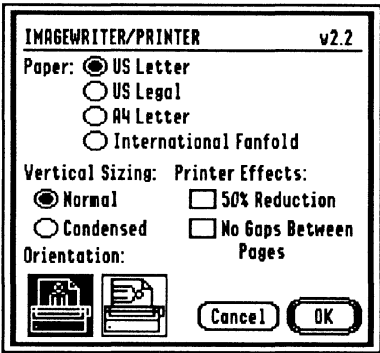


Figure 76

The “Page Setup” box allows you to designate the paper size that you’ll be using, the vertical sizing of the print (normal or condensed), the orientation of the pages (vertical or horizontal), and other special printer effects, such as reduction or enlargement.

A Step-by-Step Look at USA GeoGraph

When you're printing maps, you should always use the vertical printing format and "Normal" vertical sizing. Otherwise, your printed maps will be distorted in appearance.

Step 4 Make the appropriate choices in the "Page Setup" box and then click OK.

Step 5 Select "Printing Options" from the File menu.

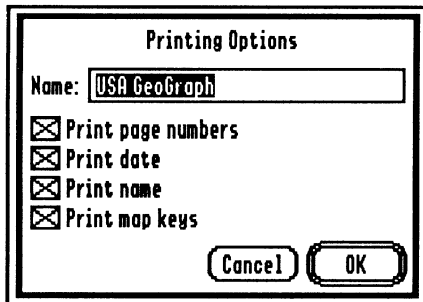


Figure 77

The "Printing Options" dialog box appears (Figure 77), asking you to give your report a name (if you wish) and to designate whether you want page numbers, the current date, the report name, and/or map keys to appear on the printed pages.

If you decide to assign a name to the report, your own name might be a good choice. (In fact, if you're a teacher with students who are using USA GeoGraph to create reports, this is a good way to make sure that their names appear on their work!) If you don't want to assign a name to the report, however, simply leave the entry line blank.

Step 6 Make the selections you want and then click OK.

Step 7 Select "Print Report" from the File menu.

The dialog box that appears (Figure 78) allows you to specify which sections of the report you wish to print. The default setting is for *all* sections of the report to be printed. If you want to print just *some* of the report sections, you must *de-select* the ones you don't want to print.

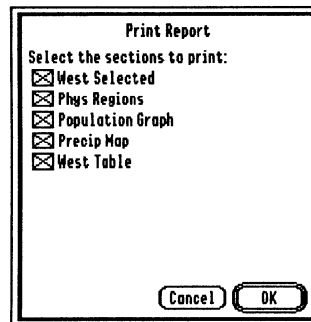


Figure 78



A Step-by-Step Look at USA GeoGraph



Step 8 Once you've made the appropriate entry and/or selections, click OK.

A second dialog box now appears (Figure 79 if you chose "LaserWriter" in Step 2; Figure 80 if you chose "ImageWriter"). As in the "Page Setup" box, the printer and printer port that you had designated with the "Choose Printer" box are listed at the top.

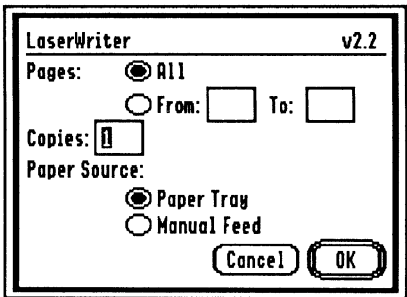


Figure 79

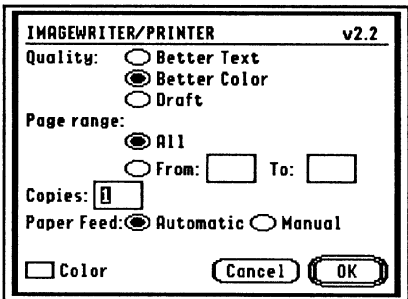


Figure 80

This dialog box provides you with control over such things as print quality (better text, better color, or draft), paper feed (automatic or manual), and the number of copies that will be printed. *The page range setting is ignored.*

If you have a color printer with a color ribbon, you can check the "Color" box in the lower-left corner of the dialog box in order to print in color.



If you use the "Print Report" command to begin printing without having first used the "Printing Options" command, the program assumes that you want page numbers, the date, the report name, and map keys printed. Of course, if you have not assigned a name to the report, no report name will be printed.



Step 9 When you've finished making appropriate selections, click OK to begin printing.

And the printing of all or part of your report begins.

A Step-by-Step Look at USA GeoGraph

If you need to interrupt the printing process at any point, simply press the Apple and Period (.) Keys simultaneously (Apple-Period).

Here are two important facts to keep in mind about printing with USA GeoGraph:

- *Map keys are printed along with maps only if "Map Keys" is checked in the "Printing Options" dialog box (see Figure 77 on page 85).*
- *Many report sections will print in a "tiled" fashion because they are too large to fit on a single sheet of printer paper. "Tiling" refers to the way in which such items are printed in individual pieces, which you must then "put together" to recreate the whole. You will probably find that large data tables are the most common type of report section to print in this manner. If you wish to avoid tiling, try to make your individual report sections small enough to fit entirely on one screen, without scrolling. Then they would almost certainly fit on a single sheet of printer paper. Using the "Page Setup" command to reduce the size of the printed image is another way of getting more information on a single sheet of paper.*



In addition to printing report sections, you also have the option of printing whatever is currently on your screen, regardless of whether you have made it a part of your report.

Printing a window

Step 1 Select "Print Window" from the File menu.

The "Print Window" dialog box appears. If it looks familiar, it *should*—it's *identical* to the second "Print Report" box (see Figures 79 and 80 on page 86). And it's used in precisely the same way. *Again, the page range setting is ignored.*

Step 2 When you've finished making appropriate selections in the "Print Window" box, click OK to begin printing.

And the printing of the item that is currently on your screen begins. The same two important points noted above about printing a report apply to printing a window as well.



A Step-by-Step Look at *USA GeoGraph*

Saving, closing, opening, and quitting

Saving a document



Let's say you're all done using *USA GeoGraph*. What do you do? How do you get out of the program without all of your hard work going to waste? And how, if you wish, can you save the work that you've done?

It's already a computing cliché, but it bears repeating:

Save your work often!

You never can tell when something will go wrong—anything from a hardware or software problem to a power blackout—that will cause your computer to lose everything stored in its memory. If you've been using your computer for a long time without saving, a lot of your valuable time can go to waste. But if you save your work often, maybe every ten minutes or so, then you'll lose only the work you've done since the last time you saved.

Step 1 Pull down the File menu and select "Save As."

If your document has not yet been saved, selecting "Save" will have the same effect as selecting "Save As."

The "Save As" dialog box appears (Figure 81), allowing you to assign a name to your *USA GeoGraph* document. Give it a name that will help you remember what you've done or created with it so that later you can easily find the document you want. *But don't choose a name that's being used for some other document.*

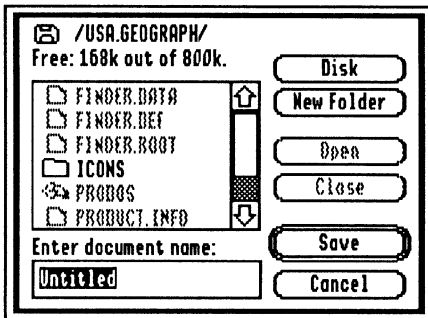


Figure 81

Step 2 Type a name for your document.

If you don't give your document a name when you save it, it will be called "Untitled."

A Step-by-Step Look at *USA GeoGraph*

There isn't room on either *USA GeoGraph* disk (the Program Disk or the Information Disk) to store more than one or two documents, so to save it you may have to use a formatted data disk. (See Appendix B, "Creating and Using a Data Disk with *USA GeoGraph*," for instructions on creating a data disk.)

Step 3 *If you're using only one disk drive, eject the Program Disk and insert your data disk.*

If you're using two disk drives, eject the Information Disk in Drive 2 and insert your data disk.

Step 4 First click the "Disk" button and then click the "Save" button to save your document to your data disk.

The "Save As" dialog box disappears and your document is now saved on your data disk under the name you gave it.

If you wish, you may continue working with that document, saving any subsequent versions under the same name by using the "Save" command from the File menu.

If you want to save a new version of your document without replacing the old version, use "Save As" instead of "Save" and give the new version a different name.

Remember: "Save As" saves a new document, whereas "Save" simply replaces a previously saved version of the document you're currently working on with its latest version.



When you close a document, you exit from that document without exiting the *USA GeoGraph* program itself. You can then quickly and easily open a different *USA GeoGraph* document.

Closing a document

Step 1 Select "Close" from the File menu.


If your document has not yet been saved or if you have made changes to it since the last time it was saved, the program will ask whether you want to save before proceeding.



A Step-by-Step Look at *USA GeoGraph*



Step 2 If the program asks, indicate whether you want to save your document.

Your document then closes and the screen goes “blank” without returning to the desktop “Finder” program. But because you haven’t left *USA GeoGraph* itself—only one particular document created with it—the *USA GeoGraph* menu bar remains at the top of the screen. Several of the menu items are grayed out because they are currently inactive. The  and File menus, however, are still active. If you wish, you can now go ahead and open a different *USA GeoGraph* document, reopen the one you have just closed, or create a new one from scratch.

Opening an existing document from within the program

Step 1 Select “Open” from the File menu.

The “Open” dialog box appears (Figure 82). Its scroll box lists any *USA GeoGraph* documents that may be saved on the disk that is currently active. An existing *USA GeoGraph* document would probably have been saved on a data disk.

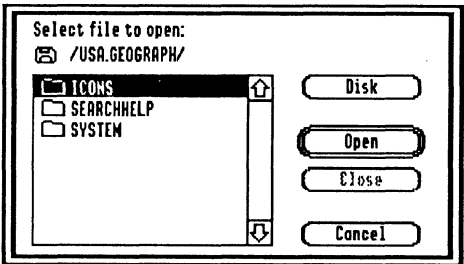


Figure 82

Step 2 If you are using one disk drive, eject the Program Disk and insert the data disk containing the *USA GeoGraph* document that you wish to open.

If you are using two disk drives and the data disk containing the document you wish to open is *not* in the second drive, eject whatever disk may be in the second drive and insert the appropriate data disk.



Step 3 If the contents of your data disk have not yet appeared in the scroll box, click the “Disk” button.

A Step-by-Step Look at *USA GeoGraph*

- Step 4** Select the name of the document you wish to open and then click the "Open" button.



The document you selected opens. It appears exactly as it was when it was last saved. You may now proceed to work with it, printing reports or changing it as you see fit.

If you've finished using *USA GeoGraph* for the time being and do not wish to open another *USA GeoGraph* document, you should use the "Quit" command.

Quitting *USA GeoGraph*

- Step 1** Select "Quit" from the File menu.



If your document has not yet been saved or if you have made changes to it since the last time it was saved, the program will ask whether you want to save before proceeding.

- Step 2** If the program asks, indicate whether you want to save your document.



Your document then closes and you exit from *USA GeoGraph*. The screen returns to the desktop "Finder" program.

- Step 3** If you're using one disk drive, close the window to whichever *USA GeoGraph* disk is currently active (most likely the Program Disk) and then drag the disk icon to the desktop "trash can," thus ejecting the disk.



If you're using two disk drives, drag the icons for both *USA GeoGraph* disks (or for one of the disks plus your data disk) one at a time to the desktop trash can, thus clearing both disk drives.

You are now ready to use a different program with your Apple IIgs. *But because you probably "booted up" with the System file on the USA GeoGraph Program Disk, you will most likely need to reboot the computer with a different System file in order to run a different program.*

A Step-by-Step Look at *USA GeoGraph*

Opening an existing USA GeoGraph document from the Finder

If you haven't yet opened the *USA GeoGraph* program and wish to create a new document from scratch, it's best to follow the procedure described in the "Getting Started" section. In short, you simply open the program using the *USA GeoGraph* icon when it appears on the screen either by using the File menu's "Open" command or by double-clicking on the icon.

If you wish, you can open an *existing USA GeoGraph* document the same way, although you have to go through the extra steps of closing your "new" document when it opens and *then* using the "Open" command from the File menu to open the existing document. In fact, you *must* open an existing *USA GeoGraph* document this way if you're using a single disk drive. *But if you're using two disk drives*, there's a much easier way to open an existing *USA GeoGraph* document from the Finder.



- Step 1** Insert the *USA GeoGraph* Program Disk in Drive 1 and the data disk containing the document you wish to use in Drive 2.
- Step 2** Open the data disk's window and double-click on the icon representing the document you want to open.
- Step 3** When the document itself appears on the screen, you may begin using it as you see fit.

Exporting data

Perhaps you'd like to export some of the data in *USA GeoGraph* to, say, an *AppleWorks* spreadsheet so that you can use it for various calculations or advanced correlation activities. The "Export Data" command allows you to do this. It works in a manner similar to the "Save As" command, except in this case you'll *definitely* need a data disk.



- Step 1** Make sure that all of the data you wish to export—all of the places and data categories you want—are selected and "active." *The "Export Data" function works only with your current database selection.*
- Step 2** Choose "Export Data" from the File menu.

The "Export Data" dialog box appears (Figure 83).

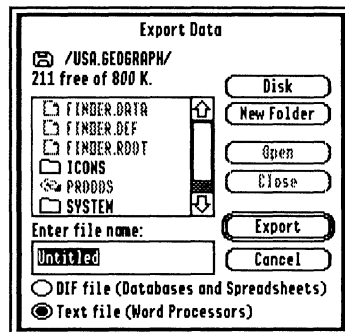


Figure 83

A Step-by-Step Look at *USA GeoGraph*

Step 3 Enter the information requested in this dialog box *but don't click the "Export" button yet.*

Before you click "Export," you need to insert your data disk.

Step 4 *If you're using only one disk drive*, eject the Program Disk and insert your data disk.

If you're using two disk drives, eject the Information Disk in Drive 2 and insert your data disk.

Step 5 First click the "Disk" button and then click the "Export" button to export your data to your data disk. When this operation is complete, you can go ahead with other activities as you see fit.

To conduct the "second half" of the exporting process—that is, to transfer the data from your data disk to *AppleWorks* or whatever other program you're going to use—follow the instructions provided with that particular program.



If you're a teacher or parent who plans on using *USA GeoGraph* with students, you may want to make certain modifications to the program in order to "customize" it to your instructional plans. You would make these modifications using the Management menu. But where is it? How on earth can you pull down a menu when it's not even listed on the menu bar? Well, that's a *secret*—or at least it is to students. But *you* can continue reading in order to find out!

There will be times when you'll want to modify *USA GeoGraph* to suit your instructional goals. You can "customize" *USA GeoGraph* in two ways:

- by setting "preferences," the data categories that will function as "defaults" as students use the program; or
- by adding to the database up to three data categories, which you can edit as you wish and remove when you no longer want them.

These tasks are performed with the Management menu. *But where is it?*

To prevent students from undoing anything you've done with the Management menu, "Management" doesn't appear on the menu bar unless you first use a secret key combination command to gain access to it.

***Using the
Management
menu to
"customize"
USA GeoGraph***

A Step-by-Step Look at *USA GeoGraph*

Accessing the Management menu



Step 1 Press **Control-A** on your keyboard. (Hold down the Control Key and type the letter "A". Then release the Control Key.)

The Management options can be used only if no *USA GeoGraph* document is currently open. For this reason, pressing **Control-A** calls up an alert box that asks whether you wish to go ahead and close your document.

Step 2 Click on the "Yes" button.

Unless you used the "Save" command immediately before pressing **Control-A**, another alert box appears, asking whether you wish to save your current document before proceeding.

If you prefer, you can choose "Close" from the File menu *before* pressing **Control-A**. In this way, your "desktop" goes "blank" without exiting the *USA GeoGraph* program itself (as explained in "Closing a Document" on pages 89-90). *Then* press **Control-A**.

Notice that the word "Management" has been added to the menu bar (Figure 84). Now you have access to the Management menu.



Figure 84

Control-A acts as a toggle switch, making "Management" appear and disappear from the menu bar. Let's see how this works.



Step 3 Press **Control-A** again.

Note how "Management" disappears from the menu bar so that the Management menu is no longer accessible.



Whenever you've finished using the Management menu to modify USA GeoGraph, be sure to use Control-A to "hide" it again.

Setting "preferences"

Perhaps you're working with young students who might be confused or intimidated by the large number of data categories in the *USA GeoGraph* database. Or maybe, because of your particular lesson plans, you want to "nudge" your students toward working with, say, ten categories of your choice. Here's how you'd go about setting "preferences"—that is, the data categories that will function as the "default" setting as your students use the program.

A Step-by-Step Look at *USA GeoGraph*

Step 1 If you haven't already done so, use **Control-A** to gain access to the Management menu.

Step 2 Pull down the Management menu and select "Set Preferences."

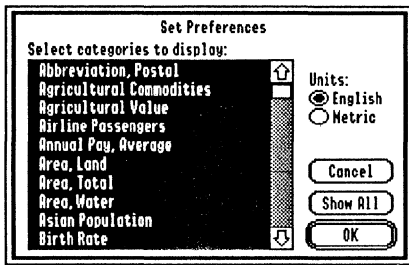


Figure 85

The "Set Preferences" dialog box appears (Figure 85). The "Set Preferences" box allows you to determine which categories will appear on the screen when students first view data cards or data tables. Using the scroll box and clicking, Apple-clicking, and/or shift-clicking, you can select as few or as many data categories as you wish.

If you prefer, you can select *all* of the categories by clicking the "Show All" button. You can also use the radio buttons to choose whether students will initially view data in English or metric units.

Step 3 Set your preferences and then click OK. (Clicking OK is not necessary if you click "Show All.")

You'd rarely want students to view the database without the "Place" category appearing on the screen. So if you try to exit from "Set Preferences" without having selected "Place," a special alert box appears (similar to Figure 27 on page 34), warning that "Place" hasn't been selected. You have two options. If you don't want the names of the states and territories to appear, click the "Continue" button. But if you *do* want them to appear, click "Add Place."

Once you've set preferences, the data categories you selected will appear on the screen when students initially use *USA GeoGraph*. But keep in mind that "preferences" are just that—*preferences*, not "requirements." Students can always use the "Show Categories" command to view additional categories and/or to remove "preferred" categories from the screen. And they can still use the "Show English Units" and "Show Metric Units" options. Your preferences can, however, be easily restored by using the "Show Prefs" button in the "Show Categories" dialog box (Figure 26 on page 30). In this way, your preferences are safely "stored" and remain readily available to students until you use the Management menu and "Set Preferences" once again to change them.



A Step-by-Step Look at USA GeoGraph



Also, if students have previously saved documents with USA GeoGraph, the preferences you set afterwards will not affect the report sections already saved.

Adding a category to the database

Even the 105 categories built into **USA GeoGraph** can't handle *everything* teachers might want to cover with their students. So we've left room for you to add *up to three additional data categories* to the database. You can create three different kinds of data categories:

- textual categories, in which the data consists of words;
- numeric categories *without* English/metric conversion capabilities, in which the data consists of numbers that may or may not have a unit of measurement assigned to them; and
- numeric categories *with* English/metric conversion capabilities, in which the data consists of two sets of numbers—one set with an English unit of measurement assigned to it and another set with a metric unit of measurement assigned to it.

In creating your additional data categories, you have several restrictions:

- no more than three categories can be added;
- no textual entry can consist of more than thirty characters, including spaces;
- no numeric entry can consist of more than fourteen characters, including commas; and
- no category can include multiple entries per place. (For instance, if you create a category called "Livestock," you cannot enter both "horses" and "turkeys" as separate entries in that category for a single state or territory.)

Also, *you cannot edit the 105 categories that are built into USA GeoGraph*. Those are "frozen"—although, of course, you can use "Set Preferences" to set "default" categories, thus "nudging" your students in the preferred direction.

Given those restrictions, here's how to go about adding data categories to **USA GeoGraph**:



Step 1 Press **Control-A** to access the Management menu. (Remember that you cannot access the Management menu until close the current document—unless, of course, no document is currently open.)

A Step-by-Step Look at USA GeoGraph

- Step 2** Select "Add Category" from the Management menu.

The "Add Category" box appears (Figure 86).

- Step 3** Enter the title of your new data category. If you like, you can also enter a category abbreviation of up to six characters.

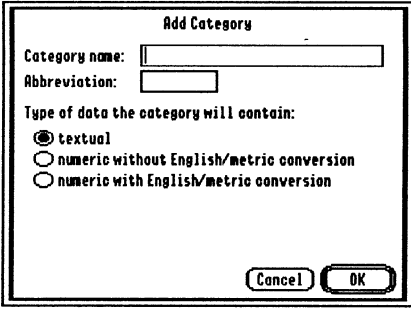


Figure 86

If you don't enter an abbreviation, the program will create one.

You may change the title and abbreviation later if you wish (see "Editing a Category" on pages 100-101).

- Step 4** Indicate whether your new category will be textual, numeric without English/metric conversion, or numeric with English/metric conversion.

Be careful when you make this decision! Once you start entering data for your new category, you will not be allowed to change this setting without deleting the category altogether and starting over from scratch.

Notice how the lower half of this dialog box changes depending on which of the three settings you have selected. If you select "textual," you cannot designate units of measurement (see Figure 86 above).

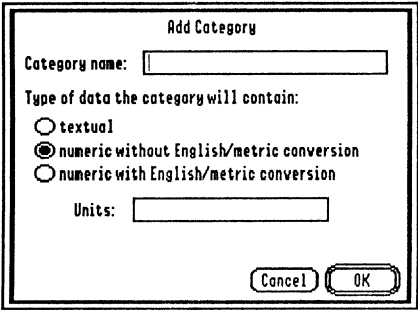


Figure 87

If you select "numeric without English/metric conversion," you may designate a unit of measurement if you wish, *but it's not required* (Figure 87).

A Step-by-Step Look at USA GeoGraph



Step 5 If necessary (depending on the option you chose in Step 4), enter your unit(s) of measurement.

Figure 88



Step 6 When you've finished supplying the information requested in this dialog box, click OK.

The data entry window now appears. This window comes in two forms: one with a single column for entering textual data or numeric data without English/metric conversion (Figure 89), and the other with two columns for entering numeric data with English/metric conversion (Figure 90).

Figure 89

Figure 90



Remember: Textual category entries can contain up to thirty characters each. Numeric category entries can contain up to fourteen characters each. Also, if you choose to create a category involving English/metric conversion, it's up to you to enter both sets of figures.



Step 7 Enter the appropriate data after the name of each state or territory.

You may find **USA GeoGraph's** word-processing features useful as you enter your new data. Basic word-processing functions can be employed through Apple's standard key-combination command equivalents: **⌘X** for "Cut," **⌘C** for "Copy," and **⌘V** for "Paste."

A Step-by-Step Look at *USA GeoGraph*

Pressing the Return Key moves your cursor down one line. This is true on both types of data entry screens. On the two-column data entry screen, pressing the Tab Key moves your cursor over to the adjacent column. Holding down the Apple Key while pressing Return or Tab moves your cursor in the opposite direction. You may also use the mouse to move your cursor.

- Step 8** When you've finished entering data for your new category, click the OK button at the bottom of the screen.

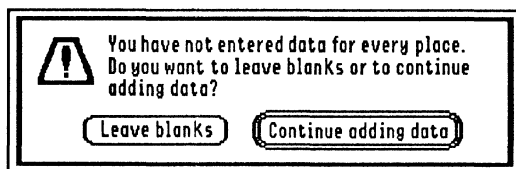


Figure 91

You may want to stop before you've finished entering data for every place. If you click OK while there are still blanks, an alert box appears (Figure 91), reminding you that some blanks remain.

You must then choose whether you wish to leave blanks (which you may later come back to fill using the "Edit Category" command) or whether you want to continue adding data, in which case you would return to the data entry screen.

After clicking OK, you return to the blank "desktop," which is where you were when you initially selected the "Add Category" command. Your new category has been added to the database, which you or your students can examine by opening a new or old *USA GeoGraph* document. Any blanks that you may have left in your new category will indeed appear on the screen as blanks.

If you want to, you can go ahead and add another category to the database before opening a new document. You can add a total of three categories. After that, the "Add Category" command on the Management menu is grayed out, indicating that it is inactive.



A Step-by-Step Look at *USA GeoGraph*

Editing a category

You cannot edit any of the 105 categories built into *USA GeoGraph*. But you can certainly edit any of the three categories you may have added yourself.



Step 1 Select "Edit Category" from the Management menu.

You may have noticed that before you added a category to the database, the "Edit Category" and "Remove Category" commands were grayed out. But now that you've added at least one category, these commands are active.

After you select "Edit Category," you'll see a dialog box that allows you to indicate which of the categories you have added to the database you are going to edit (Figure 92).

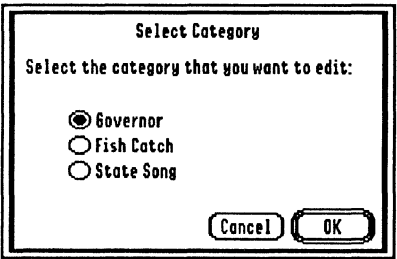


Figure 92



Step 2 Select the category you wish to edit and then click OK.

Now the "Edit Category" dialog box appears. It allows you to *rename* your category if you wish or, if appropriate, *add or change references to units of measurement*. Of course, you don't have to change anything at all if you don't want to.



You cannot, however, change your choice of type of data category (textual, numeric without conversion, or numeric with conversion). That selection is "frozen." The only way you can "change" it now is to remove your category altogether and start over again.



Step 3 When you are sure that the information in the "Edit Category" box is as you want it, click OK.

The data entry window now appears, allowing you to use the program's simple word-processing capabilities to edit the entries or to fill in any blanks.

A Step-by-Step Look at *USA GeoGraph*

Step 4 When you've finished editing the data in your category, click OK.

The data entry window disappears, replaced by the blank "desktop." The changes you made to your data category are now a part of the database, which you can examine by opening a new or old *USA GeoGraph* document.



Again, you cannot permanently remove any of the 105 categories built into *USA GeoGraph*. You can only temporarily "hide" them using the "Set Preferences" command. But you can, of course, remove any categories that you have *added* to the database.

Removing a category

Step 1 Select "Remove Category" from the Management menu.

The dialog box that appears allows you to indicate which of the categories you have added to the database you are going to remove (Figure 93).

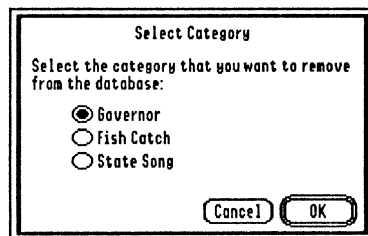


Figure 93

Step 2 Select the category you wish to remove and then click the "Remove" button.



Figure 94

An alert box now appears (Figure 94), warning that the act of removing a data category is permanent and asking whether you're sure that you want to do this. *Keep in mind that the removal of a data category cannot be reversed with the "Undo" command.*

A Step-by-Step Look at USA GeoGraph



This is your last chance to change your mind about removing one of your categories.

Consider how much time you spent collecting and entering the data for the category you are about to remove permanently. Be very sure of what you are doing before you execute the "Remove Category" command.



*Before removing any of your added data categories, you should make a copy of the **USA GeoGraph** data files containing them. This way, if you change your mind later, you'll still have a copy of the data files containing your categories. See Appendix B, "Creating and Using a Data Disk with **USA GeoGraph**," for information on saving a copy of data files.*



Step 3

If you want to go ahead and delete your category, click the "Yes" button. Otherwise, click the "No" button.

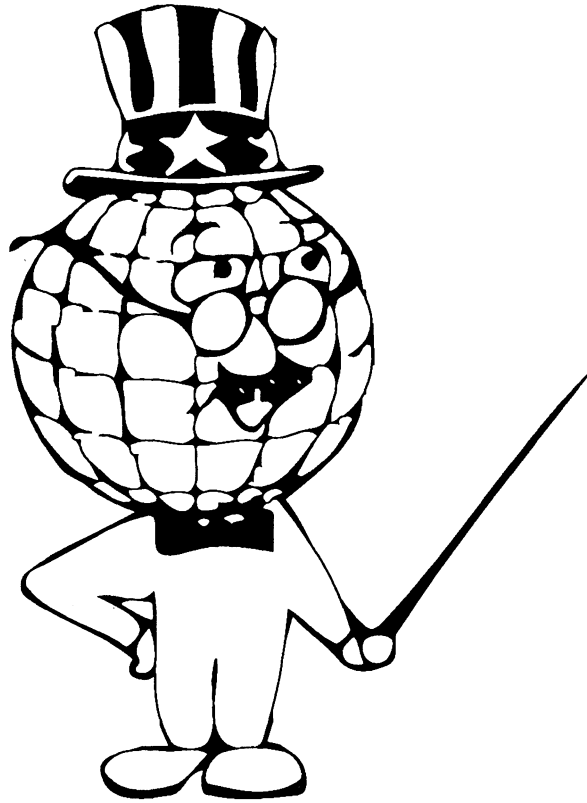
The alert box disappears and you are returned to the blank "desktop." The **USA GeoGraph** database no longer contains the data category you have removed—a fact that you can verify by opening and examining a new or old **USA GeoGraph** document.



*If, however, you or your students have saved documents that were created with **USA GeoGraph** before you edited any data categories, an alert box will appear on the screen when those documents are opened, warning that any report sections that may have been saved could be changed by your recent edits. And if saved documents were created with **USA GeoGraph** before you removed any categories, those documents cannot be opened at all. An alert box will appear to explain why this is the case. Therefore, before permanently removing any data categories, you should be very sure that you or your students no longer need access to any documents that were created and saved previously.*

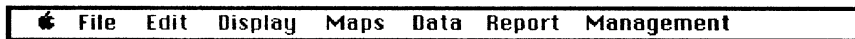
So that's about it for this step-by-step look at **USA GeoGraph**. It's now up to you! We hope you'll find this program helpful in your geography and/or other social studies work. If, however, you have any questions or additional concerns, you may find them addressed in the next few sections of this *User's Guide*.

In the meantime, happy exploring!





Reference


Reference



*The USA
GeoGraph
menu bar*

The  (Apple) menu provides access to useful information about *USA GeoGraph* as well as to any desk accessory programs that may currently be installed on your System file. For this reason, the contents of this menu may vary from time to time, depending on the System file in use.

*The  (Apple)
menu*


When you are using *USA GeoGraph*, the first two options on the  menu are:

About *USA GeoGraph*...

This option provides information about the program, including the version number of the program, its copyright, designers, and publisher (MECC), and the MECC address and telephone number.


Help...

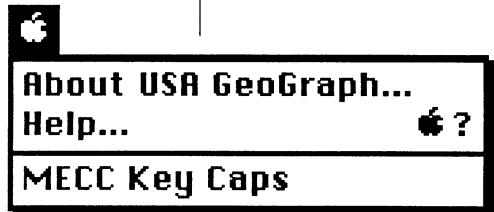
This option provides immediate access to a screen with “buttons” listing various *USA GeoGraph* features: “Categories,” “Abbreviations,” “Clicking,” “Search,” and “USA Overall Data.” Clicking on these buttons provides information about these things. This information is extremely brief and is *not* intended to substitute for reading this *User's Guide*.

USA GeoGraph comes with one or more desk accessory programs that will also be listed on the  menu unless you have deleted them for some reason (such as to make room for other desk accessories). *Desk accessories can be used any time you can pull down a menu, even in the middle of a program.* One of the desk accessories that comes with *USA GeoGraph* is:

MECC Key Caps

This desk accessory allows you to see the characters that you can type by pressing character keys in conjunction with the Shift, Control, and/or Option Keys. It provides a quick look at the entire “library” of characters available in the particular font you’re using.

Other desk accessories may have also come with your copy of *USA GeoGraph*. And if you’ve installed other desk accessory items to the *USA GeoGraph* System file (or whichever System folder is currently in use), they will appear on the  menu, too.



The File menu

The *USA GeoGraph* File menu provides access to the basic “housekeeping” functions of the program—opening, saving, and closing documents—as well as to printing functions. The commands on the File menu are:

File

New	⌘ N
Open...	⌘ O
Close	⌘ W
Save	⌘ S
Save As...	
Export Data...	
Choose Printer...	
Page Setup...	
Printing Options...	
Print Report...	⌘ R
Print Window...	⌘ P
Quit	⌘ Q

New

This command creates a new *USA GeoGraph* document, which will be called “Untitled” until you save it, at which time you will be required to give it a name. This command is not active as long as an existing document is open.

Open...

This command allows you to open an existing *USA GeoGraph* document, one that you or someone else previously created. Again, this command is not active as long as an existing document is open.

Close

This command closes a document without exiting *USA GeoGraph* itself. If the document you want to close has never been saved or if you’ve made changes to it since you last saved it, you will be given an opportunity to save the document before it actually closes.

Save

This command saves the document currently in use, replacing the existing file with the same name.

Save As...

This command allows you to save the document currently in use with a different name (thus preserving the previously saved version of the document) and/or on a different disk.

Export Data...

This command allows you to export currently selected data (nations and categories) to DIF files (for spreadsheets and databases) or text files (for word processors), which you can then use to create spreadsheet, database, or word processing documents of your own design.

Reference

Choose Printer...

This command allows you to designate the printer and printer port (on the back of the Apple IIGS computer) you will be using.

Page Setup...

This command allows you to choose the size and orientation (vertical or horizontal) of your printed pages and other special printing effects.

Printing Options...

This command allows you to assign a name to your report for printing purposes and to determine whether the pages you print will include page numbers, the report name (if applicable), the date, and/or map keys.

Print Report...

This command allows you to choose the sections of your report (see "The Report Menu" on page 114) to print and then to begin printing.

Print Window...

This command begins printing the contents of the currently active window.

Quit

This command closes the document in use (first, if necessary, providing an opportunity to save it), exits the *USA GeoGraph* program, and returns you to the desktop "Finder" program.

The Edit menu

Edit	
Undo	⌘Z
Cut	⌘H
Copy	⌘C
Paste	⌘U
Clear	

The Edit menu, which is quite important in many desktop programs, has very limited use in *USA GeoGraph* because of the nature of the program. Its first command is, however, extremely important:

Undo

This command reverses the effects of the immediately preceding command or action, providing you with a quick “fix” of mistakes. It is available most of the time while using *USA GeoGraph*.

The other four commands on the Edit menu cannot be accessed through use of this menu unless you're currently using a desk accessory that permits their use. At certain times, however (such as when you're using the “Add Category” Management option; see the description of the Management menu on page 115), the “Cut,” “Copy,” and “Paste” commands can be accessed through use of Apple's standard key combination command equivalents (see “Key Combination Command Equivalents” on pages 116-117). These commands are:

Cut

This command cuts an item you select out of the document and stores it temporarily in the desktop Clipboard. (An item remains in the Clipboard only until another item is cut or copied.)

Copy

This command makes a copy of an item you select and stores it temporarily in the desktop Clipboard.

Paste

This command “pastes” a cut or copied item in a location of your choice.

Clear

This command cuts an item you select out of the document but does *not* store it in the desktop Clipboard.

Reference

The *USA GeoGraph* Display menu provides general control over the type of display you will see on the screen. The Display menu commands are:

The Display menu

Display Map

This command displays maps on the screen, allowing access to theme, comparison, contrast, quartiles, and equal steps maps.

Display Data Cards

This command displays database information in the form of “cards,” a primarily “vertical” format. You can also view data cards by Apple-clicking or double-clicking on any item in a data table.

Display Data Table

This command displays database information in the form of a “table,” a primarily “horizontal” format. You can also view a data table by Apple-clicking or double-clicking anywhere on a data card.

Display Graph

This command displays numerical database information in graph form.

Display Distribution

This command examines the current database selection and the data categories currently selected for viewing on the screen and displays either a table that cites “matches” found within the textual categories or one that indicates where the currently selected nations fall within U.S. “deciles” for the numeric categories, whichever you prefer.

Restore Window Position

This command quickly restores any windows currently open on the screen to their “default” (original) positions. The same thing can be achieved by “grabbing” the title bar of any window and “dragging” it back to its original position, but this command does this more easily and accurately, especially for novice users of the Apple IIGS “desktop interface.”

Display

Display Map	⌘M
Display Data Cards	⌘D
Display Data Table	⌘T
Display Graph	⌘G
Display Distribution	⌘I

Restore Window Position

The Maps menu Once you've used the Display menu's "Display Map" command to view maps on the screen, the Maps menu provides extensive control over those maps. The Maps menu commands are:

Maps	
Overview Map	⌘1
Fifty States Map	⌘2
Region Map...	⌘3
Close-up Map...	⌘4
Blank Map	⌘B
Theme Map...	⌘L
Compare...	
Contrast...	
USA Quartiles...	
Equal Steps Map...	
Hide Boundaries	⌘H
Show Key	⌘K

Overview Map

This command displays on the screen a large portion of the world map—approximately one-fourth of the earth's surface, focusing on North America and most of the Pacific Ocean. This allows you to see all of area encompassed by the United States, including its Caribbean and Pacific territories. You can also zoom out from the Fifty States Map to the Overview Map by option-Apple-clicking anywhere on the "active" portion of that map.

Fifty States Map

This command allows you to "zoom in" on a map of the fifty states. You can also zoom in to this map from the Overview Map by Apple-clicking on any of the fifty states on that map. And you can zoom out from a region map to the Fifty States Map by option-Apple-clicking anywhere in that region.

Region Map...

This command allows you to zoom in on a map of a region of your choice. You can also zoom in from the Fifty States Map to any of four regions (Northeast, South, Midwest, and West) by Apple-clicking on any state within that region. From the Overview Map, Apple-clicking on any territory within the Caribbean or Pacific regions takes you directly to that region.

Close-up Map...

This command allows you to zoom in on the "close-up map" that includes a state or territory of your choice.

Blank Map

This command returns the screen from a theme, comparison, contrast, quartiles, or equal steps map to a "clear" state. Using the "Blank Map" command does not, however, affect the database, so "selected" states and territories remain selected.

Reference

Theme Map...

This command allows you to view 24 different types of thematic maps at the "Fifty States" level.

Compare...

This command allows you to view a graphic comparison of a state or territory of your choice to the rest of the United States (or the rest of the states and/or territory on a region or close-up map) in terms of a "greater than" and "less than" dichotomy for numeric data categories. For example, you can choose to compare Nebraska to the rest of the country based on population and, as a result, see the states with populations greater than Nebraska's shaded in one color and those with populations less than Nebraska's shaded in another. You can also compare places to averages or totals for the United States overall.

Contrast...

This command allows you to define a pair of "search rules" that result in a map in which all of the states and territories that meet one criterion are shaded in one color, all that meet the second criterion are shaded in another color, and all that meet *both* criteria are shaded in a third color. Although this command employs a dialog box closely resembling that of the "Search" command (see pages 112-113), it does *not* effect the current database selection.

USA Quartiles...

This command allows you to view the states and territories shaded according to their quartile ranking within the numeric data categories. For example, you can choose to see USA quartiles for per capita income and, as a result, see the states and territories that rank in the top 25% for the United States in that category shaded in one color, those in the second 25% shaded in another color, and so on. There will be an approximately equal number of places within each quartile.

Equal Steps Map...

This command allows you to view the states and territories shaded according to how they fall within four equal steps within the numeric data categories. For example, you can choose to see equal steps for per capita income and, as a result, see the places that rank in the top 25% of the figures in that category shaded in one color, those in the second 25% shaded in another color, and so on. There will usually *not* be an equal number of places within each of the four "steps."

Hide/Show Boundaries

This command functions as a “toggle switch” that allows you to choose whether state boundaries should appear on the Overview, Fifty States, and region maps. Close-up maps, however, *always* include state boundaries.

Show Key

This command allows you to display an explanatory key on the screen along with thematic, comparison, contrast, quartiles, or equal steps maps.

The Data menu

The Data menu provides extensive control over the database. The Data menu commands are:

Data		
Clear Selection		
Search...	⌘	Y
Select Places...		
Find...	⌘	F
Find Next	⌘	J
Sort...	⌘	A
Show Categories...		
Arrange Categories...		
Resize Categories...		
Abbreviate Category Names		
Show English Units	⌘	E
Show Metric Units	⌘	U

Clear Selection

This command cancels the effects of using the “Search” command or of selecting states and territories by clicking on a map. Use of this command affects both the database and the maps. It restores the database record selection to include all states and territories.

Search...

This command allows you to conduct database searches for the purpose of narrowing the database down to only those states or territories that meet your specifications. You can conduct four different kinds of searches:

1. A *Simple Search*—You specify only one criterion for states and territories to meet in order to remain part of the database record selection.
2. An *“And” Search*—You specify two or more criteria, linked by the conjunction “and,” so that states and territories must meet *all* of the criteria in order to remain part of the database record selection.

Reference

3. *An "Or" Search*—You specify two or more criteria, linked by the conjunction "or," so that states and territories need to meet *only one* of the criteria in order to remain part of the database record selection.
4. *A Search That Includes Both "And" and "Or"*—You specify three or more criteria that include both "and" and "or." "*And*" *relationships take precedence*, so that "A and B or C" results in a search for all states and territories in which either A and B are both true or C is true, while "A or B and C" results in a search for all states and territories in which either A is true or B and C are both true.

In using the "Search" command, you also have the option of *limiting* the search to your current database record selection, of limiting or expanding it to *states only*, or of expanding it to include *all* states and territories.

Select Places...

This command allows you to perform a special type of search to narrow the database down to the records for the states or territories you select by name from a scroll box.

Find...

This command allows you to find the next appearance in the database of textual or numeric data that you specify.

Find Next

This command repeats the Find command for previously specified data.

Sort...

This command arranges your current database selection according to alphabetical or numerical order within a data category of your choice.

Show Categories...

This command allows you to determine which data categories will be displayed on the screen.

Arrange Categories...

This command allows you to arrange the order in which the data categories appear on data cards, data tables, and distribution tables.

Resize Categories...

This command, active only when you're viewing a data table, allows you to modify the width of the columns on the screen.

Abbreviate Category Names

This command, which functions as a toggle switch, allows you to determine whether the category names will be abbreviated in the column headings of data tables. It does not affect data cards.

Show English Units

This command allows you to view pertinent data in English units of measurement (square miles, etc.). Using this command cancels the effects of using the "Show Metric Units" command.

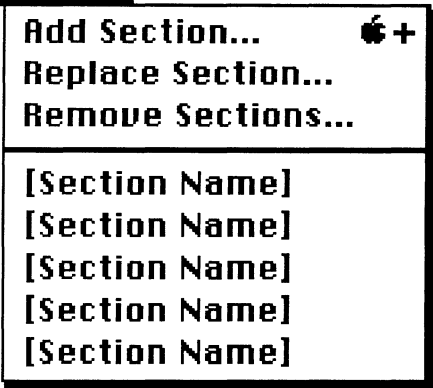
Show Metric Units

This command allows you to view pertinent data in metric units of measurement (square kilometers, etc.). Using this command cancels the effects of using the "Show English Units" command.

The Report menu

The *USA GeoGraph* Report menu allows you to create a "report" showing the results of your work, which can then be printed. A report consists of up to ten "sections" that are added one at a time. Only one report can be created per *USA GeoGraph* document, although you can modify a report (add sections to it, replace sections, or remove sections from it) as you see fit. The Report menu commands are:

Report



Add Section...

This command allows you to assign a name to the current screen selection and to add it to your report.

Replace Section...

This command allows you to replace a section of your choice with the current screen selection.

Remove Sections...

This command allows you to remove sections of your choice from the report.

Reference

In addition to these three commands, the Report menu also lists each existing report section by name. You can view your report sections at any time by selecting from this menu list.

In order to print all or part of a report, you must use the various print-related options on the File menu (see "The File Menu" on pages 106-107).

"Management" does not ordinarily appear in the *USA GeoGraph* menu bar. It appears only after you use a "secret" key combination command, **Control-A** (hold down the Control Key and press the A Key simultaneously). Because Management options cannot be used while a document is open, **Control-A** automatically closes any document currently open. The word "Management" then appears in the menu bar, to the right of "Report," allowing you access to the Management menu. The Management menu commands are:

The Management menu

Management
Set Preferences...
Add Category...
Edit Category...
Remove Category...

Set Preferences...

This command allows you to determine which data categories students will initially view on the screen in *USA GeoGraph* and whether English or metric units will initially be used in pertinent categories. In essence, it creates "default" categories, although students can easily view other data categories if they wish.

Add Category...

This command allows you to add a new data category of your own to the *USA GeoGraph* database. You may add up to three categories.

Edit Category...

This command allows you to edit and/or rename a category that you have added to the database.

Remove Category...

This command allows you to remove a category that you have added to the database.

To make "Management" disappear from the menu bar so that students cannot gain access to the Management menu, simply press **Control-A** again.

Key combination command equivalents

As already noted, the **Control-A** key combination command provides access to the Management menu. Many of the menu bar commands described above can also be executed directly from the keyboard through key combination command equivalents involving the Apple Key (⌘). These key combination command equivalents are listed below:

<i>Command</i>	<i>Key Combination Command Equivalent</i>
🍏 menu	
Help...	⌘?
File menu	
New	⌘N
Open...	⌘O
Close	⌘W
Save	⌘S
Print Report...	⌘R
Print Window...	⌘P
Quit	⌘Q
Edit menu	
Undo	⌘Z
Cut	⌘X
Copy	⌘C
Paste	⌘V
Display menu	
Display Map	⌘M
Display Data Cards	⌘D
Display Data Table	⌘T
Display Graph	⌘G
Display Distribution	⌘I
Maps menu	
Overview Map	⌘1
Fifty States Map	⌘2
Region Map...	⌘3
Close-up Map...	⌘4
Blank Map	⌘B
Theme Map...	⌘L
Hide/Show Boundaries	⌘H
Show Key	⌘K

Reference

Data menu

Search...	⌘Y
Find...	⌘F
Find Next...	⌘J
Sort...	⌘A
Show English Units	⌘E
Show Metric Units	⌘U

Report menu

Add Section...	⌘+
----------------	----

One additional key combination command is ⌘• (Apple-Period), which is used to interrupt printing once it has begun.

Various types of “clicking” actions with the mouse have different effects at different times, as noted below:

Clicking with the mouse

On Maps

Clicking—Selects a single state or territory. All previously selected places are de-selected. Also, clicking on the “grayed-out” area of a region or close-up map “slides” you over to an “adjacent” map at the same level.

Shift-clicking—Adds a state or territory to the current database selection or subtracts a state or territory from the current database selection without de-selecting any other previously selected places.

Apple (⌘)-clicking—Zooms in from the Overview Map to the Fifty States Map (as long as you click on an “active” part of the map) or, if you click on a “territorial region,” to a region map; from the Fifty States Map to the map of the region on which the cursor is resting; or from a region map to the close-up map that includes the state on which the cursor is resting. If the cursor is not resting on a particular region or state, nothing happens. No places are selected or de-selected.

Option-Apple-clicking—Zooms out from a close-up map to a region map; from a region map to the Fifty States Map, or, if you’re looking at a “territorial region,” to the Overview Map; or from the Fifty States Map to the Overview Map. No places are selected or de-selected.

Unlike World GeoGraph, double-clicking has no special effect on maps in USA GeoGraph.

On Data Cards and Data Tables

Apple-clicking or double-clicking—"Toggles" between the data card and the data table formats. When you Apple-click or double-click on a particular place in the data table format, you "zoom in" on the data card for that place. When you Apple-click or double-click on a data card, you "zoom out" to the data table for the current database selection. No states or territories are selected or de-selected in either instance.

Any other clicking action performed on anything other than an on-screen button, the menu bar, or a scroll bar has no effect whatsoever. Depressing the Option Key while Apple- or double-clicking has exactly the same effect as simply Apple- or double-clicking.

On Graphs and Distribution Tables

Any clicking action performed on anything other than an on-screen button, the menu bar, or a scroll bar has no effect whatsoever.

On Dialog Scroll Boxes

Clicking—Selects a single item. All previously selected items are de-selected.

Shift-clicking—Selects a range of items. Used after a click, shift-clicking selects all items between and including the item initially clicked on and the item shift-clicked on.

Apple-clicking—Adds an item to or subtracts an item from the current selection without de-selecting any other previous selections.

On many scroll boxes, only one selection is permitted. In those cases, shift-clicking and Apple-clicking function just like ordinary clicking.

Reference

Different types of cursors will appear on the screen to reflect various program functions:

The “selection” cursor appears most often. You use it to perform most basic program functions, including selecting menu items and clicking on maps.

The familiar “wait” cursor indicates that the program is in the process of carrying out a command or some other function you have implemented. Until it changes back to some other type of cursor, you can't do anything with it.

The “zoom in” cursor appears when you hold down the Apple Key while viewing an Overview, Fifty States, or region map. By clicking at this point (Apple-clicking), you zoom in on the next “closer” map view.

The “zoom out” cursor appears when you hold down the Apple Key *and* the Option Key while viewing a Fifty States, region, or close-up map. By clicking at this point (option-Apple-clicking), you zoom out to the next “farther” map view.

When you depress the Apple Key while viewing a data card or data table, the cursor changes to a “magnifying glass” with no “sign” in it to indicate that clicking will toggle you from a data card to a data table or *vice versa*.

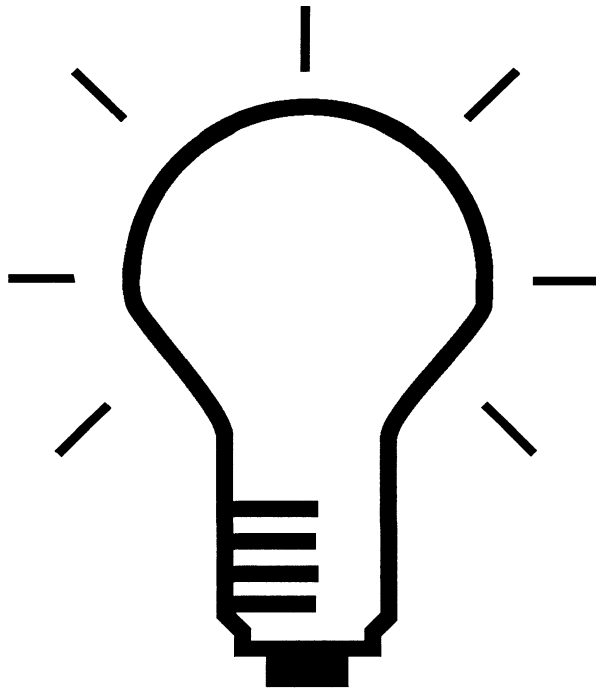
The “hand” cursor appears when you move the cursor over the “Arrange Rules” or “Arrange Categories” dialog box. It allows you to “grab” search rules or data categories and change the order in which they appear.

The “double-headed arrow” cursor appears when you move the cursor between two category headings in the “Resize Categories” dialog box. It allows you to change the width of columns in data tables.

Different types of cursors



NOTES



***Special Tips
and Techniques***

Special Tips and Techniques

When you look at comparison, contrast, quartile, equal steps, or theme maps, the states and/or territories in the current database selection appear highlighted—that is, in black—instead of in the other colors. You can see the colors for those places when you click in the ocean or another nation (such as Canada or Mexico), thus clearing the database selection—but *what if you don't want to clear your database selection?* How can you gain the full benefits of the various color maps without messing up your current database selection?

Well, you can't—in a way. You *must* lose your current database selection at *least temporarily*. That's because the **USA GeoGraph** maps are *always* closely linked to the database. They always show the state of the current database selection. But it's easy to circumvent that feature should it ever pose a problem. In fact, there are at least three different ways you can do it:

- As we said, after you click in the ocean or choose “Clear Selection” from the Data menu, your database selection is eliminated, so no black highlighting interferes with the other colors on the map. Then, after examining the map, all you have to do is choose “Undo” from the Edit menu to restore your database selection—as long as you haven't done anything else with **USA GeoGraph** since you cleared the database selection except look at the screen.
- If you had used the “Search” command to create your database selection in the first place, simply choose “Search” again from the Data menu. Your old search rule(s) should still be installed, so by clicking the “Search” button you'll restore your database selection.
- Before you clear your database selection, “save” it by adding it to your report. Just select “Add Section” from the Report menu and give your map with the highlighting on it a name. Then go ahead and clear your database selection so that you can see all of the colors on the map in their full glory. When you're done, choose your report section from the Report menu and you'll “go back in time” to before you had cleared your database selection.

The quickest way to learn the name of a particular state or territory on the Overview, Fifty States, or region map is to click on that place, thus selecting it, and then press ⌘D (that is, press the Apple and D Keys simultaneously). You'll see the data card for that place, which includes its name. Then press ⌘M to return to the map. There are, of course, other ways in which you can learn a place's name, such as by zooming in on the close-up map, where states and territories are named. Still, ⌘D is the quickest and easiest method.

Tips on using maps

Viewing comparison, world quartile, or theme maps while retaining a database selection

Quickly learning the name of a particular state or territory

Special Tips and Techniques

Tips on using the database

Narrowing the database down to states that border on certain bodies of water or other geographic entities

What if you want to narrow the database down to all of the states that border on, say, the Atlantic Ocean? You *could* just look at the Fifty States map and shift-click, one by one, on all of the states bordering that ocean. But that would be awfully tedious and, besides, you might miss one or two small states.

There's a much better way: conduct a search using the rule "Borders equals Atlantic Ocean." Then the database is narrowed down to the states that meet that criterion. (This selection will also, of course, include the Caribbean island territories of Puerto Rico and the Virgin Islands. But if you limit your search to states, these territories will not become part of your database selection.) In this way, you get the selection you want quickly, easily, and accurately.

Using the "contains" search rule operator instead of "equals"

If you want to select only those states that border on the Great Lakes, you can conduct a search using the "contains" operator instead of the more common "equals" operator. If you were to search for all states in which "Borders equals Lake," you wouldn't find anything. But if you search for the states in which "Borders *contains* Lake," you'll narrow the database down to the states whose borders include Lake Erie, Lake Huron, Lake Michigan, Lake Ontario, and Lake Superior. Since the five Great Lakes are the *only* items in the "Borders" category containing the word "Lake," you can be assured that the database selection reflects your wishes.

The difference between "equals" and "contains"

Keep in mind that either "equals" or "contains" will often work in pretty much the same way in the multiple-entry text categories, such as "Minerals and Fuels." The fact that "coal" may be only one of several entries in a multiple-entry category does not prevent the "equals" operator from working effectively in a search. So "Minerals and Fuels equals coal" and "Minerals and Fuels contains coal" will yield exactly the same search results. On the other hand, "Borders equals Mexico" and "Borders contains Mexico" will obtain different results. "Borders equals Mexico" will find only the states that border on Mexico, whereas "Borders contains Mexico" will find all of those states *plus* the ones that border on *New Mexico* since "New Mexico" contains the word "Mexico."

Also note that the "contains" operator cannot be used in numeric data categories. The *USA GeoGraph* program won't let you choose it, thus eliminating a potential source of error and confusion.

Special Tips and Techniques

As you probably know, anything you see on the screen with *USA GeoGraph* can be printed out. Does this mean that you can obtain a printout of the entire *USA GeoGraph* database? Yes, it does. Just make sure that all of the states and territories are selected (or that the selection is cleared; the effect is the same) and that all of the database categories are “active.” Also, you should be viewing the data in the data *card* format because the resulting printout is *much* easier to use than a data table printout. Then all you have to do is begin printing.

But—and this is a big “but”—we don’t recommend that you try to print out the entire database. For one thing, it takes a very long time. Even the very fastest method of printing the entire *USA GeoGraph* database (using an ImageWriter II and printing in “draft” mode) requires more than an hour-and-a-half to complete the printing process. And the result is a stack of paper nearly three inches thick. It’s not because the *USA GeoGraph* printing routine is slow, inefficient, or anything like that. It’s simply because *USA GeoGraph* contains *that* much data. When you consider data for fifty states and six territories in 105 categories, many of which contain multiple entries, you realize that printing the entire database in one fell swoop is a major undertaking. But still, if you want to do it, you can do it.

Trying to print the entire database

If your class is using several copies of *USA GeoGraph* and you wish to create one or more additional categories (as described on pages 96-99) and have all of your students work with them, do you have to go through the entire process of individually adding the new data to every single copy of the program? No, not at all. After you’ve finished adding your new categories to one of the copies, all you have to do is use the desktop “Finder” program to copy the file entitled USA.GEO.DATOA from the modified Information Disk to the other Information Disks. Or, if you prefer, you can copy the *entire* modified Information Disk to the other Information Disks. Then all of your copies of *USA GeoGraph* will have the new data.

Tips on making multiple copies of added database categories

MECC publishes a *USA GeoGraph Classroom Guide* that provides detailed suggestions about using the program with students, including dozens of lessons in the form of student handouts and accompanying teacher notes. Some lessons focus on particular regions while others cover various geographic, economic, and sociological topics. Also included are lessons that help students learn how to use various *USA GeoGraph* features as well as descriptions of several educational games students can play using *USA GeoGraph*.

Tips on using USA GeoGraph with groups of students

Special Tips and Techniques

	<p>The <i>Classroom Guide</i> concentrates on classroom situations in which students have ready access to Apple IIgs computers and the <i>USA GeoGraph</i> disks. Many of the activities described in the <i>Classroom Guide</i>, however, can easily be adapted to a situation in which there is only one computer in the classroom. The computer would be controlled by the teacher, who uses a large-screen monitor or a projection system in front of a group of students. (<i>USA GeoGraph</i> will <i>not</i>, however, work equally well with all types of projection systems. See “Different Types of Projection Systems,” below.) Focusing on current curriculum topics, the teacher can demonstrate various program functions, discuss their usefulness, and elicit questions or suggestions from students. On-screen occurrences would then serve as a stimulus for discussion.</p>
<p><i>Using USA GeoGraph as a “slide projector”</i></p>	<p>Teachers can also use <i>USA GeoGraph</i> before class to create “illustrations” to support classroom lectures or discussions. For example, a teacher might use the Report menu’s “Add Section” command to save a variety of maps, data displays, and/or graphs to accompany a lecture. Then all the teacher has to do is choose each “section” from the Report menu to display the illustration to the students. In this way, <i>USA GeoGraph</i> can be used in much the same way as a slide projector—albeit a highly advanced slide projector with a decided geographic bent. Alternatively, teachers can print maps or other types of displays, duplicate them, and distribute them to students as support material.</p>
<p><i>Different types of projection systems</i></p>	<p>As we’ve already noted, <i>USA GeoGraph</i> will not work equally well with all types of projection systems. An RGB video projector (such as the Sony 1020-Q) connected to the RGB monitor port on your Apple IIgs and set to project in the “Line” mode will provide a very high-quality color image that should be satisfactory for virtually any type of classroom display using <i>USA GeoGraph</i>. Unfortunately, these kinds of video projectors are expensive and not very portable.</p> <p>Some of the portable and relatively inexpensive “palette-type” projection systems (such as the Telex MagnaByte and the Computer Accessories Data Display) will work <i>in part</i> with <i>USA GeoGraph</i>, but always with comparatively low image quality. If you’re going to display only text (data cards, data tables, etc.) and graphs, the Telex MagnaByte 5020 is your best bet and should work to your satisfaction. It will <i>not</i>, however, differentiate colors sufficiently to be of much use in displaying maps that rely heavily on color. Other projection systems that work with the Apple IIgs in the “desktop” environment should also work with <i>USA GeoGraph</i> to varying degrees. But be sure to try out any system you may consider using before actually using it in class.</p>



***Some Questions and Answers
about USA GeoGraph***



Some Questions and Answers about *USA GeoGraph*

- Q. Why was *USA GeoGraph* designed for the Apple IIgs and not the //e or //c? And why is it available on 3.5" disks but not on 5.25" disks?
- A. Because of the memory and graphics requirements of *USA GeoGraph*, it was necessary to restrict its use to the Apple IIgs. Besides, the desktop environment of the Apple IIgs lends itself to *USA GeoGraph*'s "living map" concept. Similarly, memory requirements also restricted it to 3.5" disks. *USA GeoGraph* fits comfortably on two 3.5" disks, but it would have required *nine or ten* 5.25" disks.

Why only for the Apple IIgs and only on 3.5" disks?

- Q. Why can't I change or update the data in *USA GeoGraph*?
- A. In order to squeeze 105 categories of data into *USA GeoGraph*, it was necessary to *compact* that data. This compacting resulted in the data being "frozen," preventing users from modifying it. You can, of course, add and edit up to three additional data categories of your choice. As for the bulk of the database, MECC plans to release periodic, inexpensive updates of the *USA GeoGraph* Information Disk.

Why can't I modify the data?

- Q. I would like to prevent my students from using certain data categories altogether instead of just being able to "nudge" them toward using certain ones with the "Set Preferences" command. Why can't I restrict access to data categories that I don't want my students to use?
- A. There's a fundamental incompatibility between highly restrictive Management options and the ability for students to create and save *USA GeoGraph* documents. For instance, let's assume a student has created and saved a document that includes maps, data, and graphs involving "Birth Rate." What would happen to that document if the teacher then restricts access to the "Birth Rate" category? Would the student's hard work be eliminated? That would be terribly frustrating. In that case, would the student's use of that category override the teacher's restriction? Then why provide an option to prevent access to data categories when students can easily circumvent it?

Why can't I restrict access to certain data categories?

Because it was deemed more desirable to allow students to save their work (in case they can't complete it in a single session at the computer), *USA GeoGraph* doesn't allow teachers to prevent access to certain data categories. Instead, it allows teachers to use the "Set Preferences" Management option to create "default" data categories which students can indeed override but which can nevertheless be easily restored.

Some Questions and Answers about *USA GeoGraph*

Why aren't theme maps available at all map levels?

Q. Why are theme maps available only at the Fifty States level?

A. The villain is disk space limitations. Each theme map takes approximately 20K of memory, so we couldn't include theme maps at "closer" levels without severely cutting into memory that was needed for other desirable features. We consulted with geography educators to determine which theme maps were most desirable and at which levels. Our consultants agreed that nearly all theme maps would be most useful at the Fifty States level, where students would be able to view the nation as a whole.

Why are several different map projections used?

Q. I notice that different map projections are used for different on-screen maps. Why didn't you maintain consistency by sticking with a single projection for all of the maps?

A. The designers and graphic artists who worked on *USA GeoGraph* always chose the projection that best suited the particular part of the United States being depicted given the dimensions of the computer screen.

For the Overview Map, we needed a projection that would allow students to see all fifty states plus the locations of the Pacific and Caribbean territories on one screen. Furthermore, this had to be done with a minimum of distortion in shape and size. The map that best met these criteria was the Van der Grinten projection, which until recently was the "official" world projection of the National Geographic Society.

Polyconic projections, which are excellent for showing large areas smaller in size than an entire continent with little distortion of shape and size, were used for the Fifty States and "states" region maps. A Conic projection was used for the Caribbean region, and a Mercator projection was used for the Pacific region.

The following projections were used for the various close-up maps: *Conic*, *Lambert Conformal Conic*, *Mercator*, and *Polyconic*. Our primary concerns in determining which projections to use were accuracy and clarity of depiction on the screen.

If students have questions about the variations in projections (as well as in scales), you'll have for yourself a ready-made "teachable moment"—an opportunity to take advantage of student curiosity in order to foster learning. You may find the "Maps" lesson in the *USA GeoGraph Classroom Guide* especially helpful.

Some Questions and Answers about *USA GeoGraph*

- Q. *USA GeoGraph* includes data about only six U.S. "territories": the District of Columbia, American Samoa, Guam, Northern Marianas, Puerto Rico, and the Virgin Islands. But there are other U.S. "possessions," such as Wake Island, the Midway Islands, and the Trust Territory of the Pacific. Why aren't these included?
- A. Most of the small U.S. territories not included in *USA GeoGraph*, such as Wake and Midway, are administered by the U.S. armed forces or other branches of the government for military purposes. They have very small permanent populations (in some cases, they have *no* permanent populations). For these territories, the vast majority of entries in the *USA GeoGraph* database would have been "not applicable" or "no data available." Because of the focus in *USA GeoGraph* on "human geography," the program's designers decided not to include these small territories.

As for the Trust Territory of the Pacific, it was established by the United Nations in 1947 to be administered by the United States. Most of these islands had been under Japanese control before or during World War II. They never were truly U.S. "possessions." Rather, the United States was holding them "in trust" for the U.N. and for the peoples of the region.

At this time, the entire Trust Territory is undergoing transition. It has been effectively divided into four parts, each of which is pursuing its own path. One part, the *Federated States of Micronesia* (previously known as the "Caroline Islands"), has become an independent nation, albeit with a special economic and military relationship with the United States. As an independent nation, the Federated States of Micronesia is included in the database of *USA GeoGraph*'s "companion product," *World GeoGraph*.

Two other parts, *Palau* and the *Marshall Islands*, are also seeking independence, although they aren't quite as far along in the process as the Federated States of Micronesia. Although they aren't included in the current version of *World GeoGraph*, they will be seriously considered for future versions of that product.

Finally, the *Northern Mariana Islands* (also known as "Northern Marianas"), have elected to remain a part of the United States as a commonwealth. Future statehood is a distinct possibility, perhaps in conjunction with nearby Guam (which is, technically, the southernmost of the Mariana Islands). Because of this fact, Northern Marianas is included in *USA GeoGraph*.

Why doesn't USA GeoGraph include data about other U.S. territories, such as Wake Island, the Midway Islands, and the Trust Territory of the Pacific?

Some Questions and Answers about *USA GeoGraph*

How do I recover files that have been thrown away?

- Q. Help! One of my kids used the desktop "Finder" program to "grab" several of the files on the *USA GeoGraph* disks and throw them into the trash can. This included the built-in map and data files. Even some of those all-important System files were lost! Now my copy of *USA GeoGraph* won't work properly any more. What can I do?
- A. First things first. *USA GeoGraph* comes with its own backup disks. That is, when you opened up the *USA GeoGraph* box, you should have found two copies of the Program Disk and two copies of the Information Disk. One pair of disks (a Program Disk and an Information Disk) should be for "everyday use." *The other pair are your backups, which you should store safely away where potentially damaging hands can't reach them!* That way, in case anything goes wrong with your "everyday" disks, you still have your backup copies to fall back on.

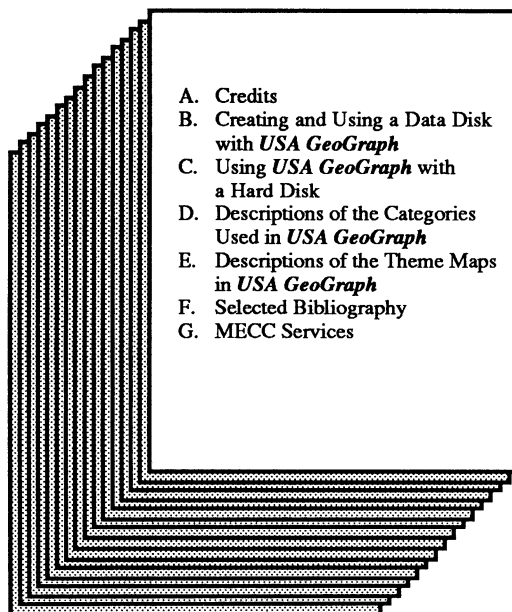
Secondly, be sure to tell anyone using *USA GeoGraph*—especially children—*not to throw any files away*. If you nevertheless find that a file *has* been thrown away, you may be able to recover it if you work fast! When a file has been thrown into the desktop "trash can," it remains there until the "Empty Trash" command (under the Special menu) is used or until some demand has been made upon the computer's memory necessitating the emptying of the trash. If an important file has *just now* been thrown away, you may be able to open up the trash can (by double-clicking on it) and drag the discarded file back into the appropriate window, thus saving it from permanent removal—and saving yourself a lot of frustration.

Still, all may not be lost for files that have been "permanently" removed, especially if you're an advanced user of the Apple IIGs. If someone has used the "Finder" to throw away a file vital to the functioning of *USA GeoGraph*, that file may *still* be on the disk, despite the fact that you can't see it in any of the desktop windows. You might try using a disk utility or file utility program, such as *Copy II Plus*TM, to recover the missing files. But this is a last resort, and it may not work.

Your best bet is simply this:

- Keep your backup copies of the *USA GeoGraph* disks safe and sound. If you don't *have* a backup copy of the Information Disk, you can *make* one using the ordinary desktop means of dragging files onto a blank disk. *The Program Disk cannot, however, be copied, so it's especially important to protect the original backup copy.*
- Instruct children (or anyone else, for that matter) using *USA GeoGraph* *not* to throw away desktop files.





Appendices

- A. Credits
- B. Creating and Using a Data Disk with *USA GeoGraph*
- C. Using *USA GeoGraph* with a Hard Disk
- D. Descriptions of the Categories Used in *USA GeoGraph*
- E. Descriptions of the Theme Maps in *USA GeoGraph*
- F. Selected Bibliography
- G. MECC Services

Appendices

Many persons played important roles in the development of *USA GeoGraph*. Its concept and basic structure are based upon the previously released *World GeoGraph* program, which was originally conceived by Dr. Don Rawitsch and Dr. Stephen Taffee of the MECC staff and designed by a MECC team that consisted of many of the same people who went on to develop *USA GeoGraph*. *USA GeoGraph* itself was designed and produced by a MECC team consisting of Charolyn Kapplinger, John J. Krenz, Steven D. Splinter, Dr. Wayne Studer, Paul R. Wenker, and Dr. Nelson Whyatt. The *User's Guide* was written by Wayne Studer and the *Classroom Guide* was written by Wayne Studer and Nelson Whyatt, with the exception of the "Teacher Training" section, which was written by Dick Carlstrom and Wayne Studer.

The following consultants offered valuable guidance in developing *USA GeoGraph*: Dr. David Lanegran and Dr. Jerry Pitzl, Professors of Geography at Macalester College in St. Paul, Minnesota; Patrice St. Peter, who teaches social studies in the Mounds View (Minnesota) School System; and Charlie Fitzpatrick, who teaches geography at St. Paul Academy and Summit School in St. Paul.

Management support was offered by Dick Burkhardt, Craig Copley, Greg Holey, Raymond D. Kush, Nan Leekley, Susan Schilling, Mark Schneider, and Stephen Taffee of the MECC staff.

MECC greatly appreciates the valuable contribution of the administrative and teaching staff of Oxbow Creek Elementary School in Anoka County, Minnesota, for allowing their school to serve as a test site for *USA GeoGraph*. Teachers Jay Hueman and Cathy Stead used *USA GeoGraph* for several weeks in their fifth-grade classes. These educators and their students did much to help ensure the quality of the program and its support materials.

Appendix A: Credits

To the Reader:

MECC has made every effort to ensure the instructional and technical quality of this courseware package. Your comments—as user or reviewer—are valued and will be considered for inclusion in any future version of the product.

Please address comments to:

MECC Software Development
3490 Lexington Avenue North
St. Paul, MN 55126

Appendices

There are three reasons for using a data disk with *USA GeoGraph*:

- to save and later re-use “documents” that you or your students have created with *USA GeoGraph*;
- to export data to other programs, such as an *AppleWorks* spreadsheet; and
- to save data categories that you have added to *USA GeoGraph*.

The procedure for creating a data disk is very simple. Just follow the standard procedure for starting up your Apple IIs using *USA GeoGraph* (see “Getting Started” on page 12). But when the desktop appears, instead of clicking on the *USA GeoGraph* icon, eject the Program Disk or the Information Disk and insert an uninitialized 3.5" disk in its place. The program will inform you that this disk is unreadable (Figure 95) and will give you the opportunity to change your mind about initializing it. (This is done to reduce the chances of your accidentally erasing an important disk.)

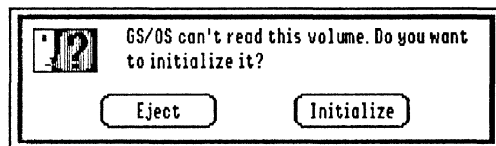


Figure 95

If you click the “Initialize” button, the program will ask you to give the disk a name. Do this and then click OK. Another dialog box appears. Simply click the “Initialize” button. The program then proceeds to initialize the disk for use with the Apple IIs. Once this process is complete, you can eject the data disk, reinsert the Program or Information Disk, and then go ahead with starting *USA GeoGraph*.

Instructions for using a data disk to save documents you or your students have created with *USA GeoGraph* can be found in “Saving a Document” on pages 88-89.

Instructions for opening documents previously saved on a data disk are found in “Opening an Existing Document from within the Program” on pages 90-91 and “Opening an Existing *USA GeoGraph* Document from the Finder” on page 92.

Instructions for exporting data to a data disk so that it can be used with, say, a spreadsheet program, are found in “Exporting Data” on pages 92-93.

Appendix B: Creating and using a data disk with *USA GeoGraph*

A data disk can also be used to save any data categories you may have added to **USA GeoGraph** (see “Adding a Category to the Database” on pages 96-99). For instance, you may wish to use one set of “extra” categories with one class and a different set with another class. Or you may wish to use different sets of extra categories at different times of the school year. Because of all of the work involved in creating these new data categories, it’s always best to save them before removing them for whatever reason (see “Removing a Category” on pages 101-102).

To save your added categories, you must save onto your data disk the *entire set* of **USA GeoGraph** categories containing those categories. In other words, you’ll be saving not only your added categories (from one to three of them) but the 105 built-in categories as well. *You must have at least two disk drives attached to your Apple IIgs in order to do this.* Use the desktop to open the window for the **USA GeoGraph** Information Disk. Then eject the Program Disk and replace it with your data disk. Drag the icons called USA.GEO.DATA0, USA.GEO.DATA1, USA.GEO.DATA2, and GEOGRAPH.MAPS onto the icon for your data disk. This will copy those files onto your data disk, which can now function as your Information Disk on those occasions when you want to use those categories.

At this point you can restart **USA GeoGraph** using the *original* Information Disk and use the “Remove Category” command to remove those categories—taking comfort in the knowledge that those categories are safely stored away on a different disk, ready for use whenever you like.

Appendices

USA GeoGraph may be installed on any SCSI hard disk that works with an Apple IIgs computer.

Before installing *USA GeoGraph* on your hard disk:

- Make sure that the version of the Apple IIgs System installed on your hard disk is up to date. Apple periodically issues updated versions of the Apple IIgs System. Because these updates normally fix errors and enhance performance, we recommend that you try to use the most recent version of the Apple IIgs System with your hard disk.
- Make sure your hard disk has sufficient capacity for the *USA GeoGraph* application program, database files, and map files, which altogether take up about 800K of disk space.

The procedure for installing *USA GeoGraph* on your hard disk is quite familiar to anyone accustomed to working with the Apple IIgs or Macintosh desktop interface. Just follow these steps:

- Step 1** If your Apple IIgs isn't already running, go ahead and start up your computer from the hard disk.
- Step 2** If you have two disk drives, insert both of the *USA GeoGraph* disks (the Program Disk and the Information Disk) in the disk drives.
- If you have only one disk drive, insert the *USA GeoGraph* Program Disk.
- Step 3** Open the *USA GeoGraph* Program Disk window and use the mouse to "drag" the *USA GeoGraph* icon (see Figure 2 on page 12) from the Program Disk window to the hard disk icon. This copies the *USA GeoGraph* application program onto the hard disk.
- Step 4** If you have only one disk drive, eject the Program Disk when the copy process is complete and insert the Information Disk in its place. (If you have two disk drives, this step isn't necessary.)
- Step 5** Now open the *USA GeoGraph* Information Disk window and drag *all* of the files from the Information Disk window to the hard disk icon. This copies the database and map files onto the hard disk.

Appendix C: Using USA GeoGraph with a hard disk

- Step 6** When the copy process is complete, eject the *USA GeoGraph* disk(s) from the disk drive(s).
- Step 7** Create a new desktop folder and name it USA.GEOGRAPH. (Be sure to insert a period instead of a space between the words.)
- Step 8** Put *all* of the *USA GeoGraph* files (the application program itself as well as the database and map files) into the USA.GEOGRAPH folder.
- Step 9** Double-click on the *USA GeoGraph* icon to start running the program.

Note that every time you try to open *USA GeoGraph* from the hard disk, the computer will ask you to insert the Program Disk to verify that you do indeed have an “original” copy of the program (Figure 96). This is to protect the program from unwarranted copying. Users of hard disks will need to have ready access to an “original” Program Disk in order to run *USA GeoGraph*.

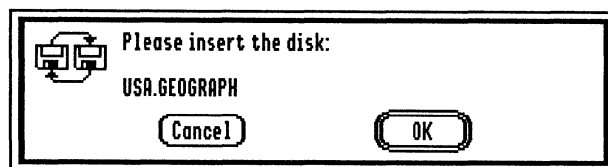


Figure 96

What if you wish to work with *USA GeoGraph* in a computer lab setting? The most efficient way is to use the Network Version, which is available separately from MECC. The Network Version of *USA GeoGraph*, which is designed to run on an *AppleTalk* network, includes a single *USA GeoGraph* disk (that's all you need) and copies of the *User's Guide* and the *Classroom Guide*, plus a network installation card with instructions for installing *USA GeoGraph* onto your network. In this way, a number of students can work with the *USA GeoGraph* program simultaneously.

USA GeoGraph is also available in specially-priced “Lab Packs” that include five Program Disks, five Information Disks, and one copy each of the *User's Guide* and the *Classroom Guide*. If you have questions about these Lab Packs or the Network Version of *USA GeoGraph*, or if wish to place an order, contact MECC at 3490 Lexington Avenue North, St. Paul, MN 55126, or call (612) 481-3500.

Appendices

The following information describes each of the 105 data categories used in *USA GeoGraph*. The "Place" category is described first. After that, categories are listed alphabetically. The abbreviations that appear in the data table headings when the "Abbreviate Category Names" feature is turned on appear in brackets after each category name. Very short category names, such as "Place," do not have abbreviations.

Whenever possible, U.S. government statistical data served as the primary source of information appearing in the database. See Appendix F, "Selected Bibliography," for a list of sources consulted.

Appendix D: Descriptions of the categories used in USA GeoGraph

Identifies each state or territory by the name by which it is most generally recognized rather than by its official name. For example, "Rhode Island" is used rather than the official "Rhode Island and Providence Plantations" and "Virginia" is used rather than the official "Commonwealth of Virginia."

Place

Cites the U.S. Postal Service's official two-letter abbreviation for each state or territory.

*Abbreviation,
postal [AbbV]*

Lists four items of agricultural produce—including such animal products as beef, pork, wool, and dairy products—that are especially important to a state or territory's economy. The produce items are generally listed in order of economic importance to that place, although sources and figures often differ widely. The absence of an item from this category for a particular state or territory does not suggest that the item is not important to the economy of that place—only that the items listed are probably more important.

*Agricultural
commodities
[AgC]*

Cites the estimated value of agricultural commodities produced by a state or territory for a single year (1986), expressed in millions of dollars, as reported by the U.S. Department of Agriculture.

*Agricultural value
[AgV]*

Cites the number of airline passengers on regularly scheduled air carriers for a single year, in this case 1983. These figures are expressed in thousands of passengers and apply to the state in which the reporting airports are located. States that rely heavily on hub airports in neighboring states will show low figures—in some cases *zero*, as in the case of Delaware, which relies almost exclusively on major airports in Pennsylvania, New Jersey, and Maryland.

*Airline passengers
[AirP]*

<i>Annual pay, average</i> [Pay]	Cites the average annual pay for the people living in a state or territory, based on figures for the late 1980s.
<i>Area, land</i> [ArL]	Provides the land area of a state or territory measured in either square miles or square kilometers, depending on whether you have chosen to work with English or metric units. These figures do not include inland water, such as lakes.
<i>Area, total</i> [ArT]	Provides the total area of a state or territory measured in either square miles or square kilometers, depending on whether you have chosen to work with English or metric units. These figures, which equal the sum of the "Area, Land" and "Area, Water" categories, include inland water.
<i>Area, water</i> [ArW]	Provides the water area of a state or territory measured in either square miles or square kilometers, depending on whether you have chosen to work with English or metric units. These figures include all inland water, such as lakes, but do <i>not</i> include off-shore territorial waters that are part of oceans, bays, gulfs, or Great Lakes.
<i>Asian population</i> [APop]	Cites the percentage of a state or territory's population that is of Asian descent, including but not limited to Japanese, Chinese, and Southeast Asian, as reported by the U.S. Census Bureau. The figures in this category also include the indigenous peoples of Hawaii and the various U.S. Pacific territories, despite the fact that they are more accurately considered to be of Polynesian, Micronesian, or Melanesian extraction.
<i>Birth rate</i> [BR]	Cites the average number of births annually per 1,000 population, based on estimates for the mid-1980s made by the National Center for Health Statistics. Figures are calculated to the nearest tenth. For comparative purposes, the overall figure for the entire world for the same period is 29.0 births per 1,000 population.

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Cites the percentage of a state or territory's population that is of African descent, as reported by the U.S. Census Bureau. The term "African American" has recently been suggested as a term preferable to "black," although this proposal has met with some controversy among Black Americans themselves. Because of this unresolved nature of this controversy, the makers of *USA GeoGraph* decided to adhere to the terminology currently in use by the U.S. Census Bureau, which is "black." In those cases in which persons consider themselves "black" in a racial sense but "Hispanic" in an ethno-linguistic sense, there may be overlapping of this category with the "Hispanic Population" category. In this and the other "ethnic group" categories in *USA GeoGraph*, the figures are based on *self-identification*. In other words, persons are placed in the category with which they identify themselves.

Black population
[BPop]

Lists the states, nations, and major bodies of water that border on a state or territory. The bodies of water included in this category can be divided into three types: primary bodies, regions of those primary bodies, and straits passing between primary bodies.

Borders
[Bord]

The primary bodies of water in *USA GeoGraph* are the Atlantic, Pacific, and Arctic Oceans as well as the five Great Lakes. The "water regions" are areas or divisions of the primary bodies of water that are outlined by stretches of land or chains of islands but aren't truly separated from the larger bodies to which they belong. The Gulf of Mexico and the Caribbean Sea, for example, are regions of the Atlantic Ocean. Straits, which are important to the world's transportation network, are narrow passages connecting larger bodies of water. The only strait included in *USA GeoGraph* is the Bering Strait. "Water regions" are listed as subdivisions of the primary bodies of water.

Arctic Ocean	Lake Erie
	Lake Huron
Atlantic Ocean	Lake Michigan
Caribbean Sea	Lake Ontario
Gulf of Mexico	Lake Superior
 Bering Strait	 Pacific Ocean
	Bering Sea

If a state borders on a "region" of a primary body of water but not on the primary body itself, only the region is listed in the "Borders" category for that state. For instance, Texas borders on the Gulf of Mexico but not on the Atlantic Ocean. Although the Gulf of Mexico is a region of the Atlantic Ocean, the Atlantic Ocean is not listed as one of Texas's borders.

<i>Borders</i> (continued)	<p>Several important bodies of water, such as the Chesapeake Bay and the Delaware Bay, aren't listed in the "Borders" category because they cannot be considered "borders" in the same sense as the ones previously listed. Rather, they are more like internal features of certain states. These are therefore listed under "Natural Features" for the appropriate states and territories. (See "Natural Features" on page 154.)</p> <p>In many cases a river forms the border between two places, such as the Ohio River between the states of Ohio and West Virginia. Rivers are not, however, listed in the "Borders" category. Instead, Ohio and West Virginia are listed as bordering each other, and the Ohio River is listed as a "Natural Feature" of both states.</p>
<i>Capital</i> [Cap]	<p>Identifies the capital city of each state or territory. The only case in which there is any ambiguity involves the Northern Marianas. Different sources cite either "Saipan" or "Susupe" as the capital. Saipan is the "main island" of the Northern Marianas. The U.S. State Department and, in fact, the people of the Northern Marianas look upon the entire island as the capital. On the other hand, Susupe is the name of the town on Saipan where most governmental business takes place. The designers of <i>USA GeoGraph</i> decided to follow the State Department in listing Saipan as the capital. Because it is the largest town in the Northern Marianas, Susupe is listed in the "Cities" category, described next.</p>
<i>Cities</i> [Cit]	<p>Lists all the cities within a state or territory with a population of at least 200,000, based on U.S. Census Bureau estimates for the mid-1980s. The cities are listed in order of size, with the largest city appearing first. If a place has no cities with a population of at least 200,000, the <i>largest</i> city within that state or territory is listed.</p>
<i>Climate zones</i> [Clim]	<p>Lists the types of climate found within each state or territory. The most predominant climate is listed first. Keep in mind that large states and territories—and sometimes even small ones—may include many different climates, although some of those climates may describe very small areas within those places. Also note that different geography textbooks and reference works use different terminology to describe various climates. In many cases climatic descriptions embrace descriptions of vegetation as well. <i>USA GeoGraph</i> uses the following climatic terminology, followed by brief descriptions:</p>

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tropical rain forest	hot and wet all year; sometimes called "wet tropical"
savanna	hot all year with distinct wet and dry seasons; sometimes called "wet-and-dry tropical"
steppe	hot summers and mild or cold winters with distinct moist and dry seasons; sometimes called "prairie" or "semiarid"
desert	dry all year and either hot all year or with hot summers and cold winters; sometimes called "arid"
mediterranean	hot and dry summers, mild and moist winters
subtropical	moist all year with hot summers and mild winters; sometimes called "humid subtropical"
marine	mild and moist all year; sometimes called "temperate marine" or "maritime"
continental	moist all year with hot or mild summers and cold winters; sometimes called "humid continental"
subarctic	moist all year with cool summers and bitterly cold winters; sometimes called "taiga"
tundra	cool and moist summers, bitterly cold and dry winters; sometimes called "subpolar"
alpine	highly variable temperature and precipitation depending upon elevation and latitude, although usually cooler and wetter than the surrounding lower-elevation regions; sometimes called "highland," "vertical," or "mountain"

*Climate zones
(continued)*

One additional type of climate—that of "ice cap" (bitterly cold and dry all year; sometimes called "polar")—is most commonly considered *not* to occur in the United States, although a few sources list it as occurring in parts of Alaska.

Keep in mind that not all places with mountains boast an alpine climate. Relatively low mountains generally do not cause a great enough climatic variation to justify the distinction of an alpine climate. A good example of this is found in the Appalachian Mountains of the eastern United States. While temperature does change somewhat with elevation in these relatively low mountains, the deviations from the subtropical or continental norms are not great enough to describe the climate as "alpine."

<i>Coastline</i> [Coast]	Cites the amount of coastline for each state or territory measured in miles or kilometers, depending on whether you have chosen to work with English or metric units. In this category, coastline is considered to be that part of a state or territory that borders on an ocean, a Great Lake, the Gulf of Mexico, or the Caribbean Sea. Shores that border on more or less “internal” bodies of water, such as the Chesapeake Bay, are not counted here.
<i>Crime, property</i> [CrimP]	Cites the number of instances of property crime per 100,000 population, as reported by the Federal Bureau of Investigation (FBI) for the year 1987. “Property crimes” are those that involve loss of property without threat of personal injury, such as burglary, larceny, and theft, including motor vehicle theft.
<i>Crime, violent</i> [CrimV]	Cites the number of instances of violent crime per 100,000 population, as reported by the Federal Bureau of Investigation (FBI) for the year 1987. “Violent crimes” are those that involve actual or threatened personal injury, such as murder, non-negligent manslaughter, rape, robbery, and aggravated assault.
<i>Date of admission</i> [Date]	<p>Cites the date on which a state entered the union. Of course, for territories, including the District of Columbia, this category lists “not applicable.” The date of admission for each of the original thirteen states is traditionally considered to be the date on which that state ratified the U.S. Constitution. Of the thirteen, Delaware was the first to do so and Rhode Island was the last.</p> <p>Special note should also be made of the case of North and South Dakota. On November 2, 1889, President Benjamin Harrison had the bills of statehood for both states before him at the same time. In order to avoid antagonizing citizens of either state by signing the other state’s bill first, Harrison shuffled the bills, signed them quickly, and reshuffled them, so that nobody—not even he—knew for sure which state entered the union first. The tradition has arisen, however, that North Dakota is considered to be the thirty-ninth state and South Dakota the fortieth. Thus, whenever you sort the <i>USA GeoGraph</i> database according to the “Date of Admission” category, North Dakota will always precede South Dakota, adhering to tradition despite the fact that their entries in this category are identical.</p>

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Cites the average number of deaths annually per 1,000 population, based on U.S. government estimates for the mid-1980s. Figures are calculated to the nearest tenth. For comparative purposes, the overall figure for the entire world for the same period is 11.0 deaths per 1,000 population.

Death rate
[DR]

Cites for each state or territory the percentage of persons aged 25 or older who have completed at least four years of college, as reported by the U.S. Census Bureau.

Education, college
[EdC]

Cites for each state or territory the average dollar expense per pupil in average daily attendance in public schools for the school year ending in June 1987, as reported by the National Education Association.

Education expenses per pupil
[EdEx]

Cites for each state or territory the percentage of persons aged 25 or older who have completed at least four years of high school, as reported by the U.S. Census Bureau.

Education, high school
[EdHS]

Cites for each state or territory the percentage of persons aged 25 or older who have obtained less than five years of formal education, as reported by the U.S. Census Bureau. The persons who are referred to in this category have received no more than an elementary education in school.

Education, under 5 years
[EdU5]

Cites the number of electoral votes for each state in presidential elections. These figures, based upon the 1980 census and the resultant state representation in Congress, are accurate for the 1984 and 1988 elections. In all likelihood, some of these figures will change for the 1992 election as a result of the 1990 census.

Electoral votes
[Vote]

Cites the percentage of a state or territory's total supply of electricity that is produced through the burning of coal, as reported by the U.S. Energy Information Administration. These figures (as well as those for the other four "Electricity" categories) are for the year 1983. The figures in these five categories may not add up to 100% because of estimation, rounding, and the fact that some electricity is produced through other means, such as wood-burning, waste-burning, and geothermal sources.

Electricity, coal
[EIC]

<i>Electricity, gas</i> [ElG]	Cites the percentage of a state or territory's total supply of electricity that is produced through the burning of natural gas, as reported by the U.S. Energy Information Administration.
<i>Electricity, hydro</i> [ElH]	Cites the percentage of a state or territory's total supply of electricity that is produced at hydroelectric power plants, as reported by the U.S. Energy Information Administration.
<i>Electricity, nuclear</i> [ElN]	Cites the percentage of a state or territory's total supply of electricity that is produced at nuclear power plants, as reported by the U.S. Energy Information Administration.
<i>Electricity, petroleum</i> [ElP]	Cites the percentage of a state or territory's total supply of electricity that is produced through the burning of petroleum, as reported by the U.S. Energy Information Administration.
<i>Elevation, average</i> [EvAv]	Cites the average elevation within the boundaries of each state and territory, measured in feet or meters, depending on whether you have chosen to work with English or metric units. These and other elevation figures in <i>USA GeoGraph</i> are from the U.S. Geological Survey.
<i>Elevation, highest</i> [EvHi]	Cites the highest elevation within the boundaries of each state and territory, measured in feet or meters, depending on whether you have chosen to work with English or metric units.
<i>Elevation, lowest</i> [EvLo]	Cites the lowest elevation within the boundaries of each state and territory, measured in feet or meters, depending on whether you have chosen to work with English or metric units. For many (but not all) places bordering on oceans, the lowest elevation is at sea level, which is listed as "0" (zero) feet or meters. Negative values indicate lowest elevations below sea level.

Appendices

Cites the amount of commercial energy consumed in one year within each state or territory, expressed either in trillions of BTUs (British Thermal Units) or in millions of megawatt-hours, depending on whether you have chosen to work with English or metric units. This data is based on energy-industry estimates for the mid-1980s and includes energy consumed in a variety of forms, including fossil fuels and electricity (however generated—hydroelectric, nuclear, geothermal, tidal, etc.). Figures are rounded to the nearest tenth.

*Energy
consumption*
[EnC]

Cites the average annual energy consumption per person for each state or territory, expressed either in millions of BTUs (British Thermal Units) or in megawatt-hours, depending on whether you have chosen to work with English or metric units. This data is based on energy-industry estimates for the mid-1980s and includes energy consumed in a variety of forms, including fossil fuels and electricity (however generated—hydroelectric, nuclear, geothermal, tidal, etc.). Figures are rounded to the nearest tenth. For purposes of comparison, the annual energy consumption per capita in 1985 for the world overall was 61.8 million BTUs or 18.1 megawatt-hours.

*Energy
consumption
per capita*
[EnCC]

Cites the amount of commercial energy produced in one year within each state or territory, expressed either in trillions of BTUs (British Thermal Units) or in millions of megawatt-hours, depending on whether you have chosen to work with English or metric units. This data is based on energy-industry estimates for the mid-1980s and includes energy produced in a variety of forms, including fossil fuels and electricity (however generated—hydroelectric, nuclear, geothermal, tidal, etc.). Figures are rounded to the nearest tenth.

Energy production
[EnP]

Cites the annual commercial energy production per person for each state or territory, expressed either in millions of BTUs or in megawatt-hours, depending on whether you have chosen to work with English or metric units. This data is based on energy-industry estimates for the mid-1980s and includes energy produced in a variety of forms, including fossil fuels and electricity (however generated—hydroelectric, nuclear, geothermal, tidal, etc.). Figures are rounded to the nearest tenth. For purposes of comparison, the annual energy production per capita in 1985 for the world overall was 54.3 million BTUs or 15.9 megawatt-hours.

*Energy production
per capita*
[EnPC]

Lists several items of general interest: state nickname(s), bird, flower, and tree. Some U.S. territories have territorial nicknames, birds, flowers, and/or trees, while others do not.

Fun facts
[Facts]

Appendices

<i>Gross domestic product</i> [GDP]	Cites the gross domestic product (GDP) of a state or territory; that is, the total value of final goods and services produced by a place or generated by commerical transactions in a given year—usually between 1984 and 1986. These figures are expressed in millions of dollars.
<i>Ground water dependence</i> [GWD]	Cites the percentage of a state or territory's population that is dependent upon ground water resources (as opposed to rivers, lakes, and other "above ground" water resources) for their drinking water, as reported by the U.S. Geological Survey.
<i>Hazardous waste production</i> [HWP]	Cites the amount of hazardous waste produced within a state or territory in a single year, measured in thousands of tons or metric tons, depending on whether you have chosen to work with English or metric units. These figures are based upon Environmental Protection Agency (EPA) estimates for the mid-1980s. In this instance, the term "hazardous waste" is used as a catch-all phrase to describe waste materials the dangers of which may be of a chemical, biological, or radioactive nature.
<i>Highway mileage</i> [HiMi]	Cites the approximate amount of paved roadway within a state or territory's boundaries, measured in miles or kilometers, depending on whether you have chosen to work with English or metric units. These figures include both rural and urban roads and, in most cases, are rounded to the nearest hundred.
<i>Highway usage</i> [HiUs]	Describes the relative usage of highways within each state or territory in terms of the average distance traveled over each unit of roadway per year, measured in miles per mile or kilometers per kilometer, depending on whether you have chosen to work with English or metric units. The figures in this category (which are rounded to the nearest hundred) are obtained by dividing the total mileage traveled by all land-based motor vehicles within a given year for each state or territory by the highway mileage in that state or territory. In short, this category provides useful figures for comparing the degree of usage of highways from place to place.
<i>Hispanic population</i> [HPop]	Cites the percentage of a state or territory's population that is of Hispanic heritage, including Mexican, Puerto Rican, Cuban, and other Latin American ancestry with Spanish cultural and linguistic ties, as reported by the U.S. Census Bureau. Because this category is of an ethno-linguistic nature, it may embrace people of European, African, Native American, or mixed descent.

Appendices

Cites up to three major industries for each state or territory, based on percentage of labor force. Here, "industries" refers to general fields of economic endeavor, including agriculture (which embraces both the tilling of soil and the raising of livestock).	<i>Industries</i> [Ind]
Cites the average number of children born alive who die before their first birthday per 1,000 live births per year, based on estimates for the mid-1980s by the National Center for Health Statistics. Figures are calculated to the nearest tenth. For comparative purposes, the overall figure for the entire world for the same period is 65.0 infant deaths per 1,000 live births.	<i>Infant mortality rate</i> [IMR]
Cites the percentage of adult women within a state or territory who are participants in the labor force—that is, who either have jobs or are looking for jobs outside the home. Keep in mind that this is <i>not</i> the percentage of the labor force that consists of women. The figures in this and the other labor-related categories are based on estimates by the U.S. Bureau of Labor Statistics.	<i>Labor force, female participation</i> [LFF]
Cites the percentage of adult men within a state or territory who are participants in the labor force—that is, who either have jobs or are looking for jobs outside the home. Keep in mind that this is <i>not</i> the percentage of the labor force that consists of men.	<i>Labor force, male participation</i> [LFM]
Cites the percentage of the labor force in each state or territory that is engaged in agriculture. For the purposes of this category, "agriculture" includes the raising of livestock as well as the tilling of soil.	<i>Labor force in agriculture</i> [LFAg]
Cites the percentage of the labor force in each state or territory that is engaged in manufacturing, construction, extractive, or other non-agricultural "blue-collar" industries.	<i>Labor force in industry</i> [LFI _n]
Cites the percentage of the labor force in each state or territory that is engaged in office or "professional" work—that is, "white-" or "pink-collar" jobs. These figures include many persons employed by the government and/or in service industries, so there is significant overlap with the "Labor Force in Services" category.	<i>Labor force in office work</i> [LFO _f]

<i>Labor force in services</i> [LFSv]	Cites the percentage of the labor force in each state or territory that is engaged in service industries—such as education, medicine, banking, insurance, plumbing, and so on, in which one's "product," so to speak, is one's own service and expertise. These figures include many persons employed by the government and/or in office or professional work, so there is significant overlap with the "Labor Force in Office Work" category.
<i>Land, built-up</i> [LB]	Cites the percentage of non-federal land within a state or territory that is constructed upon or paved over. The figures in this category include land used for residences, industrial sites, commercial sites, small urban parks, golf courses, cemeteries, airports, highways, land fills, and other types of construction. The information in this and the next five "land" categories comes from the U.S. Department of the Interior.
<i>Land, cropland</i> [LC]	Cites the percentage of non-federal land within a state or territory that is used to produce crops for harvest.
<i>Land, federal</i> [LFed]	Cites the percentage of land within a state or territory that is owned by the U.S. federal government. It includes (but is not restricted to) military bases. It also includes land embraced by other land-use categories in <i>USA GeoGraph</i> , particularly "Land, Built-up," "Land, Forested," and "Land, Rangeland."
<i>Land, forested</i> [LFor]	Cites the percentage of non-federal land within a state or territory that is "forested," defined as land with at least a 25% tree canopy cover or at least 10% stocked by forest trees of any size.
<i>Land, pasture</i> [LP]	Cites the percentage of non-federal land within a state or territory that is covered by forage plants that have been introduced by humans for the purpose of grazing by animals.
<i>Land, rangeland</i> [LR]	Cites the percentage of non-federal land within a state or territory covered by low-lying natural vegetation, such as grasses, forbs, or shrubs, which may or may not be used by humans for the purpose of grazing by animals.

Appendices

Cites the number of years a female infant born in a particular state or territory in the mid-1980s may be expected to live. These figures and those in the next category are calculated to the nearest tenth and are based on actuarial estimates that take into account a wide range of natural and social factors, including nutrition, health care, and violence. These figures do not represent the average age at which people are likely to die once they have grown up. In other words, if the female life expectancy figure for a place is 75.0, that does *not* mean that the average age of death of the adult females currently living in that place is 75. Rather, it means that females *born during the 1980s* may be expected to live, on the average, to age 75.

*Life expectancy,
females*
[LifeF]

Cites the number of years a male infant born in a particular state or territory in the mid-1980s may be expected to live.

*Life expectancy,
males* [LifeM]

Cites the percentage of families within a state or territory whose household income falls below the federal government's definition of poverty level, which varies according to household size. The term "low-income families" is preferred to something like "families living in poverty" because not all families whose household incomes fall below the government's "poverty threshold" are in fact "poor." For example, a farm family that raises a large amount of its own food may enjoy a considerably higher standard of living than an urban family with an equal or even higher monetary income. "Low-Income Family" is therefore a more accurate, less "biased" term, simply stating the facts of low household incomes without making assumptions about associated standards of living.

*Low-income
families*
[LoIF]

Lists up to three types of manufacturing industries (generally referred to by the generic terms for the actual goods produced) that are especially important to a state or territory's economy. These items are generally listed in order of economic importance to that state or territory, although sources and figures often differ widely. The absence of an item from this category for a particular place does not suggest that the item is not important to the economy of that place—only that the items listed are probably more important.

*Manufacturing
industries*
[ManI]

Cites the estimated value-added (the final value of products minus the cost of the raw materials from which they were made) of manufactured goods produced by a state or territory for a single year (1985), expressed in millions of dollars.

*Manufacturing
value*
[ManV]

Millionaires [Mill]	Cites the number of millionaires living in a state or territory <i>per 100,000 population</i> in the year 1982.
Minerals and fuels [M&F]	Lists up to three minerals and/or fossil fuels that are especially important to a state or territory's economy. These items are generally listed in order of economic importance to that place, although sources and figures often differ widely. The absence of an item from this category for a particular state or territory does not suggest that the item is not important to the economy of that place—only that the items listed are probably more important. For some places this category may include only one or two items or even “none.” Such instances suggest that the state or territory is poor in mineral resources, is not yet able to exploit its mineral resources effectively, or relies heavily on just one or two mineral resources.
Minerals and fuels value [M&FV]	Cites the estimated value of minerals and fuels produced by a state or territory for a single year (1980), expressed in millions of dollars.
Native American population [NPop]	Cites the percentage of a state's population that is of Native American descent, including American Indians, Eskimo (Inuit), and Aleuts, as reported by the U.S. Census Bureau. The figures in this category do <i>not</i> include the indigenous peoples of Hawaii and the various U.S. island territories. In those cases in which persons consider themselves American Indians in a racial sense but “Hispanic” in an ethno-linguistic sense, there may be overlapping of this category with the “Hispanic Population” category.
Natural features [NatF]	<p>Cites the natural features (such as rivers, bays, mountain ranges, mountain peaks, islands, and deserts) most often mentioned in geography textbooks for each state and territory. Constructed features, such as canals and dams, are not included. Generally the larger states have many entries in this category while smaller states and territories have fewer.</p> <p>If a natural feature appearing in the database lies within the boundaries of more than one state, it is listed under all of the states in whose boundaries it lies. Similarly, if a natural feature straddles the border of two states, it is included under both states. (For example, Lake Tahoe straddles the border of California and Nevada, so it is listed under both states.) Major rivers forming the borders of states are also included. Bordering oceans and Great Lakes are <i>not</i> included; see “Borders” on pages 143-144.</p>

Appendices

Cites the annual rate of natural increase of population in a state or territory, expressed in terms of persons per 1,000 population and based on U.S. Census Bureau estimates for the mid-1980s. Basically, this figure is obtained by subtracting the death rate from the birth rate. Figures are calculated to the nearest tenth. For those places in which the death rate exceeds the birth rate, a negative figure appears in this category. For comparative purposes, the overall figure for the entire world for the same period is 18.0.

*Natural increase
rate*
[NIR]

Cites the net change in the population of a state or territory over the period from 1980 to 1987 that occurred through migration—not through natural increase. In other words, the figure in this category represents the number of people who migrated into a state or territory during this period minus the number of people who migrated out of that state or territory. This information is based on U.S. Census Bureau estimates. A negative value indicates that more people left a state or territory than entered it during this period.

*Net migration,
1980-87*
[NetM]

Cites the total estimated nitrogen oxide air pollutant emissions in each state and territory in a single year (1982), measured in thousands of tons or thousands of metric tons, depending on whether you have chosen to work with English or metric units. The information in this and the next category is based upon estimates by the U.S. Environmental Protection Agency (EPA). Nitrogen oxides are major contributors to the problem of acid rain.

Nitrogen oxides
[NO]

Cites the total estimated particulate (dust, ash, smoke) air pollutant emissions in each state and territory in a single year (1982), measured in thousands of tons or thousands of metric tons, depending on whether you have chosen to work with English or metric units.

Particulates
[Part]

Cites the annual per capita income of each state or territory, expressed in dollars, based on U.S. Bureau of Economic Analysis estimates for 1987. These figures are useful as one factor to consider in evaluating and comparing the “standard of living” in different places. They’re obtained by dividing a state or territory’s gross domestic product figure for a given year by its population figure for the same year. The figures in this category, however, will *not* agree with those you would obtain if you divide the figures in the “Gross Domestic Product” category by those in “Population 1988” because of the difference in years of calculation (1987 versus 1988) as well as the rounding of figures and other adjustments.

Per capita income
[PCI]

Political index [Pol]

Provides a rough indication of the partisan political leanings of a state, based upon the 1988 state and federal elections and, for offices not up for election in 1988, the current party affiliations of those holding offices at the time of the elections. For each state, values were assigned to either the Republican or Democratic Party based on the following scale:

- 1988 presidential election – 10 points
- federal senators – 4 points each
- federal representatives – 2 points each
- governors – 5 points
- state senators and representatives – 1 point each

When these points were totaled for each state, the state was designated “Republican” or “Democratic” depending on whether the Republican or Democratic Party received a majority of the points. Then, the majority figure was divided by the total figure to obtain a percentage figure that, because it always represented the majority, would always be greater than 50 but less than 100. This would suggest the relative strength of the “majority” party in each state’s politics. One of the parties was then designated as starting at 0 (zero) and the other as starting at 100. (For fairness, the flip of a coin determined that 0 would represent a “totally” Democratic “ideal” and that 100 would represent a “totally” Republican “ideal.”) Then the majority percentage figure for “Democratic” states was subtracted from 100 to obtain an index figure. The following scale resulted:

	strongly Democratic	somewhat Democratic	borderline	somewhat Republican	strongly Republican			
0	12.5	25.0	37.5	50	62.5	75.0	87.5	100

Therefore a state with a Political Index of, say, 13.2 would be strongly Democratic, with the Democratic Party having a virtual lock-hold on political power in that state. A state with an index of 34.5 would be somewhat Democratic but not overwhelmingly so. An index of 48.9 would very much indicate a borderline state in which neither party has clear dominance. An index of 63.1 would suggest a somewhat Republican state, but, again, not overwhelmingly so. And an index of 88.6 would indicate a state that is strongly Republican, to the virtual exclusion of the Democratic Party.

If students were to sort states “from 0 to 9” on the basis of Political Index, the states ranking “first” would be the ones most strongly Democratic and the ones ranking “last” would be the ones most strongly Republican. Students should, however, keep in mind that this indicator is just that—an indicator useful for comparative and speculative purposes, and *not* by any means a definitive figure.

Appendices

Cites the approximate population living *within the modern-day borders* of a state or territory in 1800, as reported by the U.S. Census Bureau. Figures are rounded to the nearest thousand. It is very important to keep in mind that these figures are for modern-day borders. For instance, in 1800, the state of Virginia included the modern-day states of Virginia and West Virginia; the state of Massachusetts included the modern-day states of Massachusetts and Maine. The figures reported in this category, however, embrace only that portion of a state's population living in its modern-day territory—not its territory in 1800. The figure for West Virginia is the number of persons who in 1800 were living in that part of Virginia that eventually became West Virginia. The figure for Maine is the number of persons in 1800 living in that part of Massachusetts that eventually became Maine.

For other places that were not yet states in 1800 but for which reliable population estimates within those eventual borders are available, those figures are provided. If the entry in this category for a particular state or territory reads “no data available,” it means precisely that—not that no one lived in that area in 1800.

Population 1800
[P1800]

Cites the approximate population living *within the modern-day borders* of a state or territory in 1850, as reported by the U.S. Census Bureau. Figures are rounded to the nearest thousand. Once again, it is important to keep in mind that these figures are for modern-day borders. In 1850, the state of Virginia still included the modern-day state of West Virginia. The figures reported in this category embrace only that portion of a state's population living in its modern-day territory—not its territory in 1850. The figure for West Virginia is the number of persons who in 1850 were living in that part of Virginia that eventually became West Virginia.

For other places that were not yet states in 1850 but for which reliable population estimates within their eventual borders are available, those figures are provided. If the entry in this category reads “no data available,” it means precisely that—not that no one lived in that area in 1850.

Population 1850
[P1850]

Cites the approximate population living within the various states and territories in 1900, as reported by the U.S. Census Bureau. Figures are rounded to the nearest thousand. By 1900, the borders of all modern U.S. states had become “solidified,” despite the fact that several eventual states (Oklahoma, New Mexico, Arizona, Alaska, and Hawaii) had not yet entered the union and were still territories. Population figures for 1900 are, however, available for these eventual states.

Population 1900
[P1900]

Appendices

<i>Population 1900</i> (continued)	If the entry in this category for a modern-day territory reads “no data available,” it means precisely that— <i>not</i> that no one lived there in 1900.
<i>Population 1950</i> [P1950]	Cites the approximate population living within the borders of a state or territory in 1950, as reported by the U.S. Census Bureau. Figures are rounded to the nearest thousand.
<i>Population 1988</i> [P1988]	Cites the approximate population living within the borders of a state or territory in 1988 (the most recent year for which reliable figures are available for every state), as reported by the U.S. Census Bureau. Figures are rounded to the nearest thousand.
<i>Population 2000</i> (projected) [P2000]	Provides the U.S. Census Bureau’s estimate of the most likely population of a state or territory in the year 2000, based on current trends and patterns of birth, death, and migration. Figures are rounded to the nearest thousand.
<i>Population age 65 and over</i> [P65+]	Cites the percentage of a state or territory’s population age 65 and over. These figures are based on U.S. Census Bureau data for 1987 and are calculated to the nearest tenth of a percentage point.
<i>Population born outside state</i> [PBOS]	Cites the percentage of a state or territory’s population in 1980 born outside the borders of that state or territory.
<i>Population density</i> [Dens]	Cites for each state or territory the average number of people per square mile or square kilometer, depending on whether you have chosen to work with English or metric units. Figures are rounded to the nearest tenth. These figures are obtained by dividing the overall 1988 population by the land area, although the figures here may not precisely match those you might obtain by dividing the population and area figures provided in the database because of the rounding off of data.
<i>Population foreign-born</i> [PFB]	Cites the percentage of a state or territory’s population in 1980 born in countries other than the United States and its territories. This figure does <i>not</i> include children born of U.S. citizens temporarily living overseas (as in military or diplomatic service).

Appendices

Cites the net increase in population for a state or territory over the period from 1980 to 1987. This figure combines the population change due to migration with the population change due to natural increase. In other words, this figure represents the number of people who migrated into a state or territory during this period plus the number of people born there, minus the number of people who migrated out of that state or territory and minus the number of people who died there. A negative value indicates a net decrease in population.

*Population growth
1980-87*
[PGro]

Cites the annual rate of total population increase in a state or territory, expressed as a percentage of the 1980 population. These figures are based on U.S. Census Bureau estimates for the the period from 1980 to 1987. This figure takes into account both natural increase (births minus deaths) and net migration (in-migration minus out-migration). Negative values indicate decreasing populations.

*Population growth
rate 1980-87*
[PGR]

Cites the number of people per physician in each state or territory, based on mid-1980s figures from the U.S. Census Bureau.

*Population per
physician* [PPP]

Cites the percentage of a state or territory's population under the age of 15. These figures are based on 1987 estimates from the Population Reference Bureau in Washington, D.C., and are calculated to the nearest tenth of a percentage point.

*Population under
age 15*
[P15-]

Cites the average annual precipitation for each state or territory, expressed in either inches or millimeters, depending on whether you have chosen to work with English or metric units. Figures are rounded to the nearest tenth of an inch or to the nearest millimeter. Precipitation in the form of snow is converted to its equivalent in rainfall.

*Precipitation,
annual average*
[Prec]

For states with several different types of climates, average annual precipitation for various locations within that state are averaged together to result in an average for the state as a whole. Obviously, for very large states, such as Alaska, Texas, and California, many different locales are used, and annual average precipitation for the various locations can range anywhere from virtually nothing to well over 60 inches per year. Even very small states, such as Hawaii, can have startling variations depending on where the measurements are taken. Still, the same technique of averaging the figures for different locations is always used. This results in a state or territorial average that, despite its shortcomings, is nevertheless useful for comparative purposes.

<i>Recreation lands</i> [RecL]	Cites the amount of land within each state or territory that has been set aside for recreational use—specifically federal, state, and local parks and forests—expressed in square miles or square kilometers, depending on whether you have chosen to work with English or metric units.
<i>Region</i>	<p>Identifies the region of which each state or territory is a part. Different geography textbooks and reference works recognize different “breakdowns” of regions. For instance, some books cite the “Northeast” as a single region, while others divide it into “New England” and the “Middle Atlantic States.” Some books cite all of the “South” as a single region, while others break it down further. And even when regional terminology is in basic agreement, often there are disagreements as to which states are included. Is Maryland part of the Northeast or the South? Is Kentucky part of the South or the Midwest? Is Alaska part of the West or a separate region unto itself?</p> <p>While geography textbooks were certainly an important consideration in determining what would be the breakdown of regions in <i>USA GeoGraph</i>, a major influence on the final determination was the fact that each regional map would have to be depicted in a clear and useful manner on the computer screen. In other words, what would “fit”? The designers of <i>USA GeoGraph</i> decided to adhere to the “official” regional breakdown used by the U.S. Census Bureau, which consists of the “Northeast,” “Midwest,” “South,” and “West.” In addition, <i>USA GeoGraph</i> includes two additional regions for U.S. territories: “Caribbean Island Territories” and “Pacific Island Territories.”</p>
<i>Soil erosion</i> [Soil]	Cites the average annual loss of cropland due to natural forces (wind, rain, etc.) within each state or territory, expressed in thousands of tons or thousands of metric tons, depending on whether you have chosen to work with English or metric units. This information is based upon estimates by the U.S. Department of Agriculture Soil Conservation Service.
<i>Status</i>	States simply whether each place is a state or a territory. The word “territory” is used as a generic term for all U.S. “possessions” that are not among the fifty states and includes the District of Columbia as well as island dependencies in the Pacific and Caribbean.

Appendices

Cites the total estimated sulfur oxide air pollutant emissions in each state and territory in a single year (1982, the most recent year for which reliable figures are available for every state), measured in thousands of tons or thousands of metric tons, depending on whether you have chosen to work with English or metric units. This information is based on estimates by the Environmental Protection Agency. Sulfur oxides contribute to the problem of acid rain.

Sulfur oxides
[SO]

Cites the average January temperature for each state or territory, expressed in either degrees Fahrenheit or degrees Celsius, depending on whether you have chosen to work with English or metric units. Figures are rounded to the nearest whole number. The average temperature for the month takes into account both the average high daytime temperature and the average low nighttime temperature.

*Temperature,
January average*
[TJan]

As with the "Precipitation, Annual Average" category (see page 159), average temperature can vary widely from one part of a state to another, especially in larger states. Again, the technique of calculating the average from a variety of locations within the larger states is used. This results in a state or territorial average figure that, despite its shortcomings, is useful for comparative purposes.

Cites the average July temperature for each state or territory, expressed in either degrees Fahrenheit or degrees Celsius, depending on whether you have chosen to work with English or metric units. Methodology is identical to that of the "Temperature, January Average" category.

*Temperature,
July average*
[TJul]

Provides the number of final and proposed toxic waste sites in each state or territory that have been placed on the National Priorities List as of June 1988, as determined by the Environmental Protection Agency. These sites are selected through the use of a numerical evaluation system that measures the risk posed by the site. Sites on this list are given priority in receiving federal funds for clean-up. The current list includes 1,177 sites.

Toxic waste sites
[TWS]

Cites the unemployment rate as a percentage of the labor force in each state or territory, as reported by the U.S. Bureau of Labor Statistics. These figures are for the year 1987.

*Unemployment
rate*
[Unem]

<i>Union membership</i> [Union]	Cites union membership as a percentage of the employed non-agricultural labor force in each state or territory, as reported by the Industrial Relations Data and Information Services. These figures are for 1982.
<i>Urban population 1980</i> [Urban]	Cites the percentage of a state or territory's population living in urban areas, as determined by the U.S. Census Bureau in the 1980 census. The "urban population" is defined as all persons living in places with populations of 2,500 or more that are incorporated as cities, villages, boroughs, or towns, but excluding persons living in rural portions of extended cities. Using this criterion, all populations in the United States are defined as either "urban" or "rural."
<i>Urban population change 1970-80</i> [UPC]	Cites the change in the urban population of a state or territory from 1970 to 1980. This figure is obtained by subtracting the urban population percentage for 1970 (as reported by the U.S. Census Bureau) from the urban population percentage for 1980. A negative figure indicates that the percentage of a state or territory's population that lives in urban areas decreased from 1970 to 1980.
<i>Water use for irrigation</i> [Irrig]	Cites the average amount of water used <i>per day</i> within a state or territory for the purpose of agricultural irrigation, measured in millions of gallons or millions of liters, depending on whether you have chosen to work with English or metric units. These figures are for the year 1985 as reported by the U.S. Geological Survey.
<i>Water use per capita</i> [WUC]	Cites for each state or territory the average amount of water used <i>per day</i> per person, measured in gallons or liters, depending on whether you have chosen to work with English or metric units. Again, these figures are for 1985 as reported by the U.S. Geological Survey.
<i>White population</i> [WPop]	Cites the percentage of a state or territory's population that is "white"—that is, of European descent—as reported by the U.S. Census Bureau. In those cases in which persons consider themselves "white" in a racial sense but "Hispanic" in an ethno-linguistic sense, there may be overlapping of this category with the "Hispanic Population" category.

Appendices

USA GeoGraph includes 24 theme maps that can be viewed at the "Fifty States Map" level. The following descriptions provide information about each of these maps. They are arranged in alphabetical order.

Keep in mind that the state and national borders that appear on these maps are always modern-day, even on theme maps of a historical nature. If you wish, you can use the Maps menu's "Hide Boundaries" command to remove the state borders. In addition, remember to use the "Show Key" command, also on the Maps menu, to view an explanatory color-key for each map.

Appendix E: Descriptions of the theme maps in USA GeoGraph

Depicts various ranges of the average acidity of rainfall in different parts of the United States, measured in pH units. The lower the pH, the more acidic the rain. Although a pH of 7.0 is "neutral" (neither acid nor base), rainfall is normally slightly acidic, so only rainfall with a pH reading of less than 5.6 is usually considered "acid rain." Nevertheless, this map delineates areas with pH readings as high as 6.5. Acid rain should therefore be considered a significant problem in those areas on this map with average pH readings of 5.5 or lower. This map is based on reports from the Canada/United States Co-ordinating Committee on Transbounding Air Pollution.

Acid rain

Indicates the predominant type(s) of agriculture (including dairy farming and livestock raising) in various parts of the United States.

Agricultural regions

Shows how the United States was divided during the American Civil War from 1861 to 1865. Southern states that seceded from the Union and formed the "Confederate States of America" are shown in red. Slave states whose governments remained loyal to the Union (sometimes referred to as the "Border States") are shown in a mixed red and blue pattern, which results in a somewhat "checkered purple" appearance. Note that West Virginia, which was formed in 1863 out of counties in Virginia that remained loyal to the Union, falls into this category. The remaining Union states (the "Free States") are shown in blue.

Civil War

U.S. territories that had not yet become states are shown in yellow. Most of these territories remained firmly in Union control, although for a brief time the area immediately to the west of Texas was controlled by a territorial government sympathetic to the Confederacy. The Indian Territory (present-day Oklahoma) was itself divided, with some tribes supporting the Union, others supporting the Confederacy, and still others remaining neutral. Alaska and Hawaii, which were *not* U.S. territories during the Civil War, are shown in gray, just like the foreign nations of Canada and Mexico.

Climate zones	Shows the various climate zones in the United States. For brief descriptions of the characteristics of each climate zone appearing on this map, see the information about the “Climate Zones” database category (on pages 144-145) in Appendix D, “Descriptions of the Categories Used in <i>USA GeoGraph</i> .”
Dialect regions	<p>Distinguishes the geographic regions most closely associated with the major dialects of modern American English as described by various linguists, most notably John Nist in his book <i>A Structural History of English</i>. Keep in mind the following facts:</p> <ul style="list-style-type: none">• The thirteen dialect regions shown on this map and described below only represent <i>major</i> dialects. Each major dialect contains various sub-dialects.• “Black American” dialect (or, more accurately, dialects) does <i>not</i> appear on this map because, far more so than any of the dialects that <i>do</i> appear on the map, its use hinges upon a particular ethnic group rather than upon geographic location. Some linguists consider Black American English a specialized sub-dialect of the Southern dialect, whereas others consider it quite separate altogether.• In this age of mass communication and extreme mobility, distinctions among dialects of American English are becoming less conspicuous all the time. Lack of dialectal distinctions will be especially pronounced near the “boundaries” between any two dialect regions.• Again because of the extreme mobility of American society, large numbers of persons living within any particular dialect region shown on this map do <i>not</i> speak in that dialect. <p><i>Central Midland dialect</i>—This variation of modern American English is generally considered to be the best candidate for “Standard American,” and is thus sometimes called “Emerging General American.” Not only is it the predominant dialect of the vast central region of the United States, but it is also the favored speech of the mass media, particularly television. Television network news anchors almost invariably speak in the Central Midland dialect.</p> <p><i>New England dialect</i>—This dialect is characterized by the “loss” of the <i>r</i> sound in the middle of such words as “barn” (pronounced <i>bahn</i>) and horse (<i>hoss</i>); the addition of a final <i>r</i> sound in many words ending in <i>a</i>, such as “idea” (<i>ideer</i>) and “Cuba” (<i>Cubar</i>); the use of a “broad” British <i>a</i> in words like “ask” (<i>ahsk</i>) and “aunt” (<i>ahnt</i>); and the addition of the <i>y</i> sound before the “long” <i>u</i> sound in such words as “dew” (<i>dyoo</i>) and “news” (<i>nyooz</i>).</p>

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New York City dialect—Found in New York City and its suburbs, this dialect is characterized by the dropping of the final *r* in such words as “brother” (*brutha*) and “another” (*anutha*) and the substitution of the *t* sound for the *th* in words like “thought” (pronounced just like *taught*) and the *d* sound for the *th* in words like “this” (*dis*) and “that” (*dat*). Sometimes the *er* sound at the beginning and in the middle of words is pronounced *oi*, as in the case of “bird” being pronounced *boi*. In other cases the reverse is true, with words like “toilet” being pronounced *terlet*. The New York City dialect shows the strong influence of nineteenth- and early twentieth-century European immigration, particularly of Jews and Italians.

Middle Atlantic dialect—This dialect differs little from Central Midland (Emerging General American), although it betrays some influence of the neighboring New York City and Southern dialects.

Western Pennsylvania dialect—Found almost exclusively in the western half of Pennsylvania, though spilling over slightly into neighboring states, this dialect is also similar to Central Midland, although with a strong “Pennsylvania Dutch” (German) influence, particularly in its idioms and vocabulary.

North Central dialect—Although a direct “descendant” of the New England dialect, the North Central dialect has lost many of the older dialect’s unusual features—so much so that, in many ways, it is almost indistinguishable from Central Midland. Primary differences lie in vocabulary and idioms, although speakers of the North Central dialect pronounce the word “greasy” *exclusively* with an *s* sound, whereas in Central Midland, “greasy” may be acceptably pronounced with either an *s* or a *z* sound. This dialect is found in western New England, most of New York, and around the Great Lakes, extending into the eastern Dakotas.

Northwestern dialect—Almost identical to Central Midland, the Northwestern dialect is distinguished by slightly different pronunciations of certain vowels. For example, “various” is often pronounced with a “long” *a* sound (*vay-rious*) in the Northwestern dialect as opposed to the “short” *a* sound exclusively used in Central Midland.

Southwestern dialect—Again almost identical to Central Midland, the Southwestern dialect is characterized by the strong influence of Spanish-speakers, particularly in the vocabulary. Some linguists believe that a distinctive “California dialect” is emerging as well.

*Dialect regions
(continued)*

<i>Dialect regions (continued)</i>	<p><i>Southern dialect</i>—More accurately described as a complex bundle of sub-regional dialects, most of the dialects spoken in the South do share certain traits that allow them to be grouped together in this manner. One of the most characteristic traits is the frequent “stretching” of simple vowels into diphthongs, as in the case of “dog” (<i>dawug</i>) and “flash” (<i>flayish</i>). Also, the “long” <i>i</i> sound is often pronounced <i>ah</i>, as in “I” (<i>ah</i>) and “time” (<i>tahm</i>), and final <i>r</i> sounds are often dropped or replaced by a diphthong in words like “her” (<i>huh</i>) and “here” (<i>heyah</i>).</p> <p><i>Appalachian dialect</i>—Commonly looked upon as a stereotypically “hillbilly” dialect, the Appalachian dialect is found in the southern portion of the Appalachian Mountain region, although it also stretches across Kentucky and Tennessee toward the Ozarks. Many linguists consider it, of all major American dialects, to be the one closest to the form of speech used by the earliest English settlers of North America. Among its distinguishing characteristics are the exclusive use of the <i>z</i> sound as opposed to the <i>s</i> in “greasy” and the preference for a “broad” <i>o</i> sound instead of the “short” <i>u</i> sound in words like “hungry” (<i>hongry</i>).</p> <p><i>Cajun dialect</i>—Unique to southern Louisiana, the Cajun dialect shows the extremely strong influence of the French spoken by the Acadians who moved to this area from Canada in the eighteenth century. In fact, many of the people in this region still prefer their variety of French to English. When English <i>is</i> spoken, it is basically a highly specialized variation on the Southern dialect spoken with a noticeable French accent.</p> <p><i>Hawaiian dialect</i>—The Hawaiian dialect of American English is characterized by the strong influence of Japanese and native Hawaiian in vocabulary and vocal inflections. Linguists agree that much additional research needs to be done on American English as it is spoken in Hawaii.</p> <p><i>Alaskan dialect</i>—Again, this is a case where a great deal of research still needs to be done. So far it seems that American English, as it is spoken in Alaska, is quite similar to Central Midland or Northwestern. Because of the remoteness of many parts of the state, distinctive sub-dialects are likely to form, if they haven’t already.</p>
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<i>Elevation</i>	Depicts various ranges of elevation in the United States. While viewing this map, you can use the “Show English Units” and “Show Metric Units” commands to change the units of measurement you see on the key from feet to meters and back again. The information upon which this map is based comes from the U.S. Geological Survey.
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Depicts various ranges of energy consumption in the United States. While viewing this map, you can use the “Show English Units” and “Show Metric Units” commands to change the units of measurement you see on the key from millions of BTUs per square mile per year to megawatt-hours per square kilometer per year and back again. This map is based upon energy-industry estimates.

Energy consumption

Indicates where in the United States various types of mineral or fuel energy resources are extracted from the earth. These energy resources include various types of coal (anthracite, bituminous, sub-bituminous, and lignite), petroleum, natural gas, and uranium.

Energy resources

Shows the predominant ethnic groups in various parts of the United States, defined on a county-by-county basis. In this case, “predominant” means that a particular ethnic group forms either a majority or a large plurality of the population within a given county. Areas shaded pink, defined as “other,” are those in which ethnic groups other than the seven specifically identified are predominant, including Italians, Irish, various Eastern Europeans, and Asians (the latter particularly in Hawaii). Areas shaded olive green, defined as “areas of extreme diversity,” are those in which there is no one predominant ethnic group—that is, in which no one group makes up a majority or large plurality. The information upon which this map is based comes from the 1980 census.

Ethnic population

Indicates where land in the United States is owned by the federal government in the form of national parks and monuments (including state parks with close ties to the federal park system), national forests, national grasslands, and other federal lands (including military bases).

Federal lands

Depicts various ranges of length of growing season in the United States, measured in months. As the key indicates, areas that have a growing season of twelve months—that is, a year-round growing season—are shown in dark green. At the opposite extreme, areas that have little or no growing season, and thus virtually no agriculture, are shown in blue-green.

Growing season length

Indian reservations and culture regions

Indicates in red where in the United States there are large federal and state American Indian reservations. The other colors and patterns delineate the ten major culture regions of the indigenous Native American populations:

Arctic—A culture adapted to life in extremely cold polar climates, dominated by the hunting of such Arctic animals as whales, walruses, caribou, and polar bears. This culture group includes the Eskimo (also known as the Inuit) and Aleuts.

Subarctic—Also a hunting culture in many ways similar to that of the Arctic group, although with a far greater reliance on migration, following the caribou herds. In fact, peoples of the Subarctic culture group traditionally relied almost exclusively on caribou in much the same way as Plains Indians relied on the buffalo. Among the tribes belonging to this culture region are the Khotana, Kutchin, Dogrib, Chipewyan, and Sekani.

Northwest Coast—A culture dominated by fishing of the rivers and coasts of the Pacific Northwest. Whaling and mountain hunting were important as well. Northwest Coast peoples, including the Chinook, Kwakiutl, Tsimshian, Nootka, Yurok, and Tlingit, were also experts at utilizing the extensive timber resources of the region and are well-known for their elaborate totem poles.

California—Another fishing and hunting culture, although the people of this culture region also relied heavily on seed gathering—especially acorns, which they converted into flour. Among the tribes in this culture group are the Shasta, Miwok, Yokuts, Pomo, and Chumash.

Plateau—A culture dominated by salmon-fishing and intricate, highly effective political structures. Often this included representative government and tribal confederacies. Among the tribes in this group are the Klamath, Shuswap, Spokane, Cayuse, Yakima, and Nez Percé, although the latter were strongly influenced by neighboring tribes of the Great Plains culture region.

Great Basin—A culture dominated by the needs of survival in extremely rugged, desert or semi-desert terrain. Its peoples were nomadic, subsisting on seeds, roots, insects, and small mammals. After the acquisition of horses, some of these tribes adopted the characteristics of neighboring Great Plains peoples. Among the tribes in this group are the Modoc, Ute, Paiute, Shoshone, and Washo.

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Southwest—Another desert/semi-desert culture, although the peoples of this group did not adopt the nomadic ways of the Great Basin culture. Rather, the Southwest tribes—which included the Navajo, Hopi, Zuñi, Rio Grande Pueblos, Mojave, Pima, Papago, and Apache (the latter strongly influenced by the Great Plains culture)—developed a sophisticated culture distinctive for adobe and stone architecture, irrigation-based agriculture, and advanced skills in weaving and pottery.

Great Plains—Perhaps the best-known of the North American Indian culture groups, the Plains Indian culture was actually a historically recent phenomenon. Before the introduction of horses to the region by Spaniards, the Great Plains were very sparsely settled, its few inhabitants eking out a meager living. But horses changed all that, allowing the region's original peoples, as well as newcomers from neighboring regions, to exploit the huge buffalo herds with tremendous effectiveness. This nomadic culture was embraced by such tribes as the Dakota (also known as the Sioux), Cheyenne, Pawnee, Arapaho, Kiowa, Crow, Mandan, Blackfeet, Wichita, Osage, Omaha, Iowa, Kansa, and Comanche.

Northeast Woodlands—The first Native American culture encountered by English settlers, the tribes of the Northeast Woodlands group were typified by fairly sophisticated agriculture, supplemented by hunting and fishing. The forest trees and animals provided their food and shelter, the latter of which included wigwams and longhouses. Among the many tribes in this culture region are the Algonquin, the Iroquois (including the Cayuga, Mohawk, Oneida, Onandaga, and Seneca), Tuscarora, Huron, Massachuset, Pequot, Delaware, Powhatan, Miami, Erie, Cree, Ojibwa (also known as the Chippewa), Sauk, Fox, Winnebago, and Potawatomi.

Southeast Woodlands—In many ways quite similar to the tribes of the Northeast Woodlands, the peoples of the Southeast Woodlands culture region were even more advanced and diverse in their agriculture. Because of their “sedentary” way of life, they settled in large towns and villages, often with highly organized political structures. This is perhaps why they were among the first American Indian tribes to widely adopt the so-called “ways of the white man”; some were therefore known as the “Civilized Tribes.” Included in this group are the Cherokee, Shawnee, Chickasaw, Creek, Choctaw, Catawba, Alabama, Natchez, and Timucua. The Seminole, which were an offshoot of the Creek, though with a great mixture from other tribes, are also part of this group.

*Indian reservations
and culture regions
(continued)*

Land use	Indicates the predominant type of land use in various parts of the United States, divided into five categories: agriculture, forests, swampland, urban/ industrial, and barren (or “unutilized”). For further delineation of agricultural land use, see the “Agricultural Regions” theme map. For further delineation of forest land, see the “Vegetation Regions” theme map.
Natural hazards	Indicates areas of the United States that have relatively high risks of certain “natural hazards” of a meteorological or geological nature: tornadoes, hurricanes, river flooding, and volcanoes and/or earthquakes. If an area doesn’t have the coloration indicating, for instance, high or moderate tornado risk, it doesn’t mean that that area has <i>no</i> risk of tornadoes. Rather, it simply means that the risk of tornadoes is quite a bit <i>lower</i> there than it is in the high or moderate tornado-risk areas. The information upon which this map is based comes from the National Weather Service and the U.S. Geological Survey.
Physiographic regions	<p>Shows the ten major physiographic (“physical geography”) regions of the United States. Different physiographic regions have highly distinctive topographies. These regions are as follows, listed alphabetically:</p> <p><i>Appalachian Highlands</i> – The Appalachian mountain system, including its various ranges (such as the Allegheny, Blue Ridge, Great Smoky, Adirondack, and Green Mountains) and their valleys and foothills, including the Piedmont. In New England, this mountainous region extends right down to the Atlantic Coast.</p> <p><i>Arctic Slope</i> – The northernmost portion of Alaska (and Canada), characterized by a steady, relatively steep decrease in elevation (hence “slope”) from the Rocky Mountain System (Brooks Range) northward to the Arctic coast. Sometimes it is referred to as the “North Slope.”</p> <p><i>Atlantic-Gulf Coastal Plain</i> – The southeastern coastal flatlands. It starts with a narrow strip in the Northeast, embracing Cape Cod and Long Island. From there it stretches along the coast down to Texas, with a wide “bulge” extending northward up the Mississippi River. Much of this area is Tidewater, where the rivers are salty and are affected by the ocean tides.</p> <p><i>Hawaiian Island Chain</i> – A chain of islands in the middle of the Pacific Ocean. These islands are of volcanic origin and still include several active volcanoes.</p>

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Interior Plains – The flatlands of the central United States, commonly identified with the “Midwest,” although extending around the Great Lakes into the western part of New York. The eastern half of this region is commonly referred to as the “Central Lowlands.” The western half is generally called the “Great Plains.”

Inter-mountain Basins and Plateaus – The vast, high-elevation “valley” between the Pacific Mountain System and the Rocky Mountain System. Generally, this is a “tableland” marked by deserts, semi-deserts, mountains, mesas, canyons, and gorges. It includes the Columbia Plateau, the Colorado Plateau, and the Great Basin. In the northern United States and southern Canada, the Pacific and Rocky Mountain Systems converge, causing an “interruption” in this region. But then, in northern Canada, the two mountain systems separate again, allowing the Inter-mountain region to continue on up into Alaska, where it includes the Yukon Valley.

Ozark Highlands – A hilly, elevated region that lies between the Interior Plains and the Atlantic-Gulf Coastal Plain in the south-central part of the country. It is frequently cut by gorges and valleys, making it rugged terrain. The southwestern portion of this region is often referred to as the “Ouachita Highlands,” and sometimes this entire region is called the “Ozark-Ouachita Highlands.”

Pacific Mountain System – The chain of mountains that line the Pacific Coast of North America, including the Coast Range (often called the “Coastal Range”), Cascades, and Sierra Nevada. It extends up through Canada into Alaska, where it embraces the Wrangell, Alaska, and Aleutian Ranges.

Rocky Mountain System – The vast chain of mountains that divide the Interior Plains from the Inter-mountain Basins and Plateaus. It includes a large number of ranges, including the Bitterroot, Sangre de Cristo, Blue, Davis, Bighorn, and Wasatch Mountains, and extends up through Canada into Alaska, where it embraces the Brooks Range. Some geologists consider the Rocky Mountain System to be the northern half of a great intercontinental mountain range that extends through Mexico and Central America and down into South America, where its southern half emerges as the Andes.

Superior Upland – The southern portion of the Canadian Shield (also known as the “Laurentian Upland”), extending down into the United States around Lake Superior. This region is noticeably rockier and hillier than the surrounding plains and is characterized by a large number of lakes and marshes.

*Physiographic
regions
(continued)*

<i>Physiographic regions (continued)</i>	Keep in mind that these are only the <i>major</i> physiographic regions. In many geography texts, some of these regions are subdivided into smaller regions.
<i>Population density</i>	Depicts various ranges in the population density of the United States. While viewing this map, you can use the “Show English Units” and “Show Metric Units” commands to change the units of measurement you see on the key from people per square mile to people per square kilometer and back again. Areas shown in white (only a few parts of Alaska) are virtually uninhabited. The information upon which this map is based comes from the 1980 census.
<i>Precipitation, annual average</i>	Depicts various ranges of average annual precipitation in the United States. While viewing this map, you can use the “Show English Units” and “Show Metric Units” commands to change the units of measurement you see on the key from inches to millimeters and back again. The information upon which this map is based comes from the National Weather Service.
<i>Settlement patterns</i>	Indicates which parts of the United States had been settled by Europeans, their descendants, and/or other non-indigenous peoples at various times in the nation’s history—as of 1700, 1790, 1820, 1850, 1870, 1890, and since then. It does <i>not</i> take into account historical population distribution of Native American peoples: American Indians, Aleuts, and Inuit (Eskimo).
<i>Temperature, January average</i>	Depicts various ranges of average January temperature in the United States. These figures take into account both daytime and nighttime temperatures. While viewing this map, you can use the “Show English Units” and “Show Metric Units” commands to change the units of measurement you see on the key from degrees Fahrenheit to degrees Celsius and back again. The information upon which this map is based comes from the National Weather Service.
<i>Temperature, July average</i>	Depicts various ranges of average July temperature in the United States. If some of these ranges seem a little low to you, keep in mind that they take into account nighttime lows as well as daytime highs. While viewing this map, you can use the “Show English Units” and “Show Metric Units” commands to change the units of measurement you see on the key from degrees Fahrenheit to degrees Celsius and back again. Once again, the information upon which this map is based comes from the National Weather Service.

Appendices

Delineates the various “steps” in the territorial expansion of the United States. Some textbooks and atlases do not distinguish the basin of the Red River of the North (in the north-central part of the United States) as being a separate territorial acquisition from the Louisiana Purchase. This is because the U.S. government maintained that the Louisiana Purchase indeed included this region. Great Britain, however, claimed this land as well. It was not until the conclusion of a treaty between the United States and Great Britain fifteen years *after* the Louisiana Purchase, in 1818, that the basin of the Red River of the North indisputably became U.S. territory. That is why this *USA GeoGraph* theme map distinguishes it from the Louisiana Purchase.

Territorial expansion

Also, some textbooks and atlases do not distinguish the Webster-Ashburton Treaty lands from the original territory of the United States. These areas in northern Maine and northeastern Minnesota were disputed between the United States and Great Britain until the signing of the treaty in 1842.

Note that this map does not distinguish the thirteen original *states* from the *rest* of the land that was part of the original territory of the United States. For example, although Illinois was *not* one of the original thirteen states, the territory that eventually became Illinois *was* part of the original territory of the United States as defined by the Treaty of Paris of 1783, which ended the Revolutionary War.

Shows the various time zones in the United States. Because the time advances by one hour for every zone going from west to east, the key includes a “sample time” for each zone, beginning with 1:00 for the westernmost time zone among the fifty states, Hawaiian Standard Time, and ending with 6:00 for the easternmost zone, Eastern Standard Time. In this way, students should easily be able to see that “Eastern time” is five hours later than “Hawaiian time.” Note that this map does not take Daylight Savings Time into account and the fact that a few parts of the country do not adhere to Daylight Savings Time. In effect, these parts of the country are within one time zone for about half of the year but in a different time zone for the other half.

Time zones

Also note that all of Alaska (except for the westernmost Aleutian Islands, which do not appear on this theme map) adheres to a single “Alaskan” time zone. This is a very recent change. Until the mid-1980s, Alaska was divided into four distinct time zones (Pacific, Yukon, Alaskan-Hawaiian, and Bering). Older maps, globes, atlases, and geography textbooks that deal with time zones will therefore be out of date in this respect.

<i>Vegetation regions</i>	Shows the predominant type(s) of natural vegetation in various parts of the United States. Natural forms of vegetation—and the corresponding vegetation regions—are largely the result of various factors of nature, including climate zones, physiographic regions, and soil types.
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<i>Water sufficiency</i>	Indicates areas in the United States that face actual and potential problems with fresh water supply, including groundwater depletion and high levels of pollution. The information upon which this map is based comes from the U.S. Geological Survey.
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Appendices

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NOTES

Appendices

MECC is an organization established in 1973 to assist Minnesota schools in implementing educational computing. MECC provides a variety of services to education, including 1) development and distribution of instructional computing courseware; 2) in-service training for educators and development of materials for conducting training; and 3) educational computing assistance through newsletters and equipment purchase contracts. MECC's knowledge and expertise in the educational computing field comes from more than fifteen years of working with and providing leadership for thousands of educators on a daily basis.

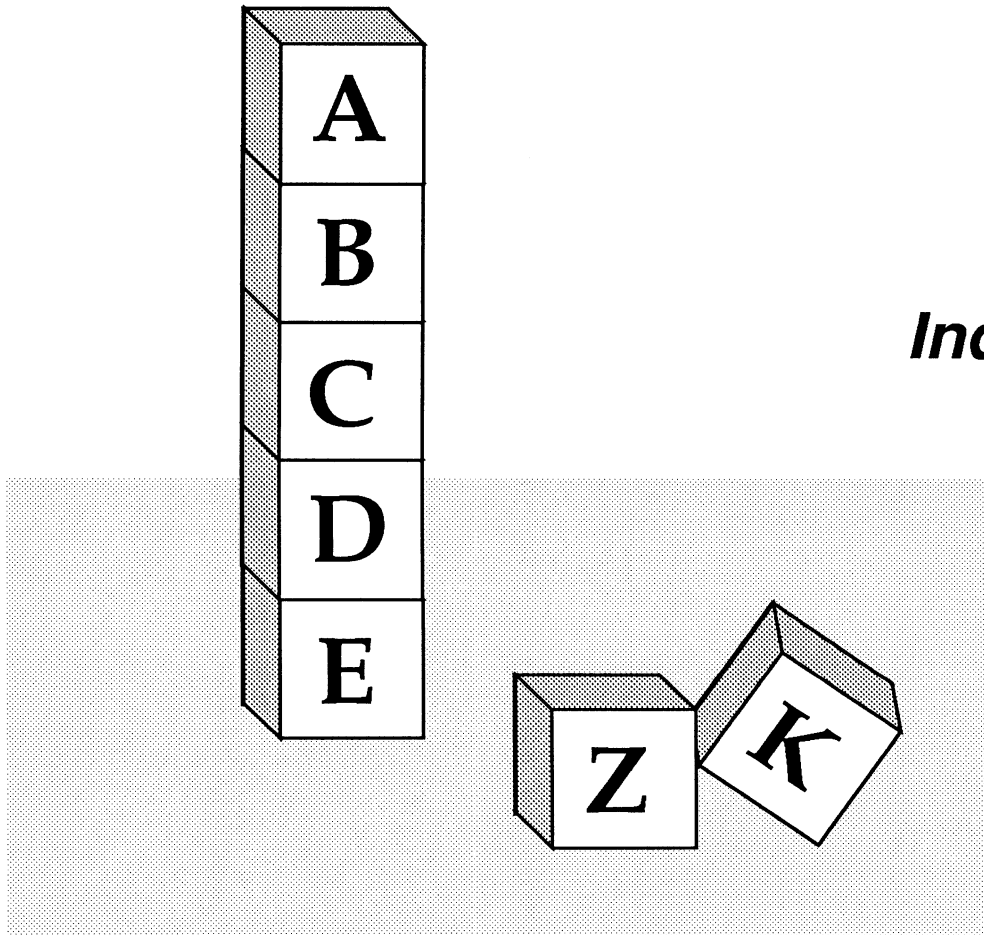
- ***MECC Educational Computing Catalog***
A catalog containing descriptions of instructional computing courseware as well as training and planning materials is published annually and distributed at no charge. To request a catalog, write or call MECC Customer Services.
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A catalog featuring "Emerging Technologies in the Classroom," such as laser videodisc players and LCD computer projection systems, is published twice a year and distributed at no charge. To request a catalog, write or call MECC Customer Services.
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- ***Training and Staff Development Programs***
MECC conducts educational computing workshops for educators throughout the United States. For information on workshop schedules or to arrange a special training activity, write or call MECC Training Services.
- ***MECC Network Newsletter***
Published regularly throughout the school year, MECC's newsletter focuses on MECC activities, services, and products. To obtain, write or call indicating your interest in the *MECC Network* newsletter.
- ***Help Line***
If you have any problems using MECC software:
 - 1) make note of the *name* and *version number* of the product;
 - 2) note the *brand* and *model* of the equipment involved, as well as the type of *printer card* used if the problem concerns a printer;
 - 3) write or call the Help Line to describe the problem.

For information on all the above items, use the MECC General Information telephone number: **612/481-3500**.

MECC
3490 Lexington Avenue North
St. Paul, MN 55126

Appendix G: MECC services

NOTES



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