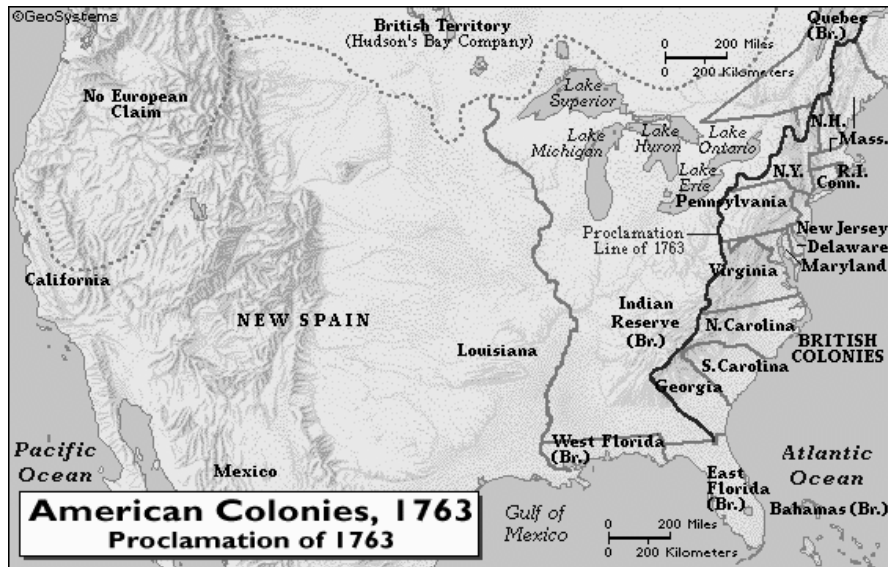




The Uses of Geography

Social Studies School Service

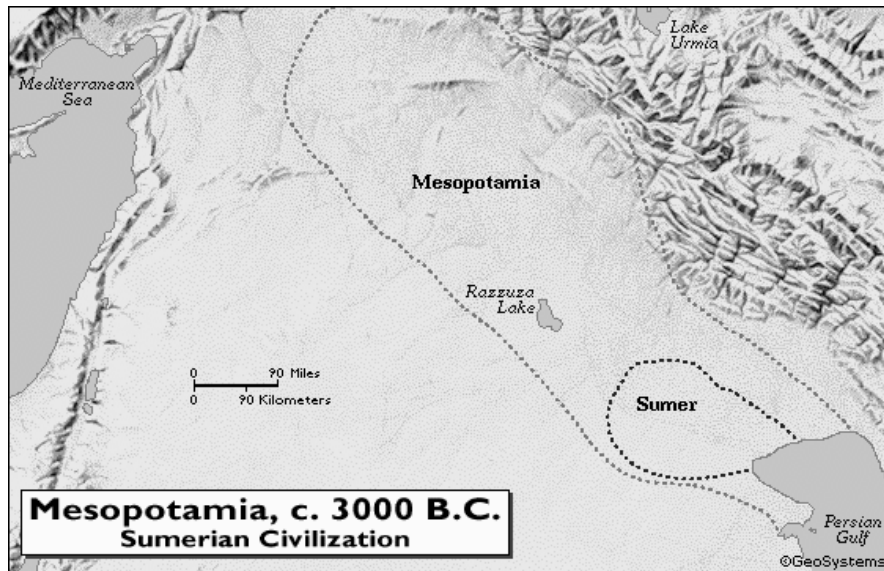
Geography can help us learn about the past. It can also help us understand why things are as they are today, and it can assist us in preparing for the future. You'll learn how in this presentation.



Social Studies School Service

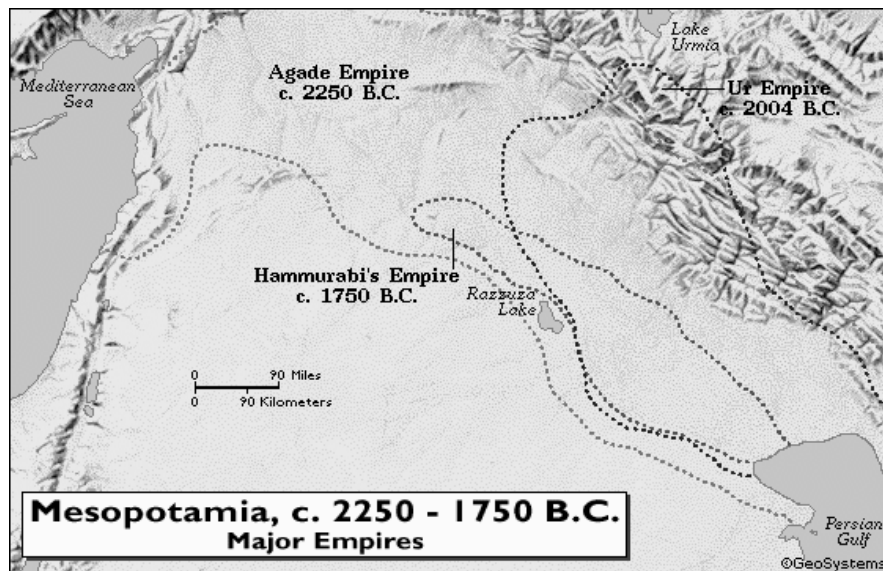
(Geography Standard 17)

Think about history classes you've taken. You've undoubtedly seen maps that accompany topics in your textbooks or that hang on your classroom wall to illustrate important historical events and trends. Maps and other types of geographic information can be invaluable in helping you to understand where, why, and how an event occurred or a pattern unfolded.



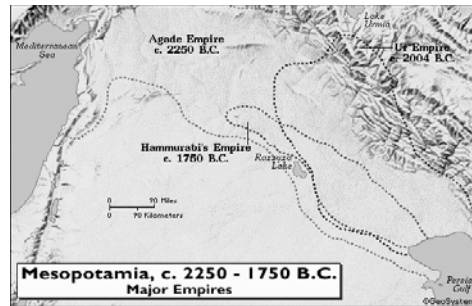
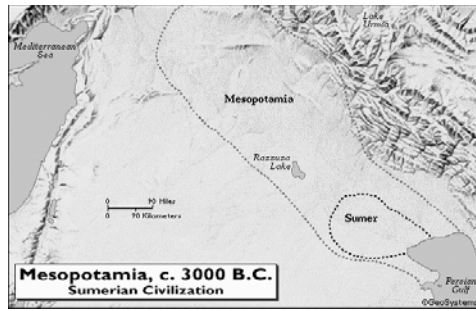
Social Studies School Service

This map of Mesopotamia around 3000 B.C. shows the Mesopotamian and Sumerian boundaries at that time.



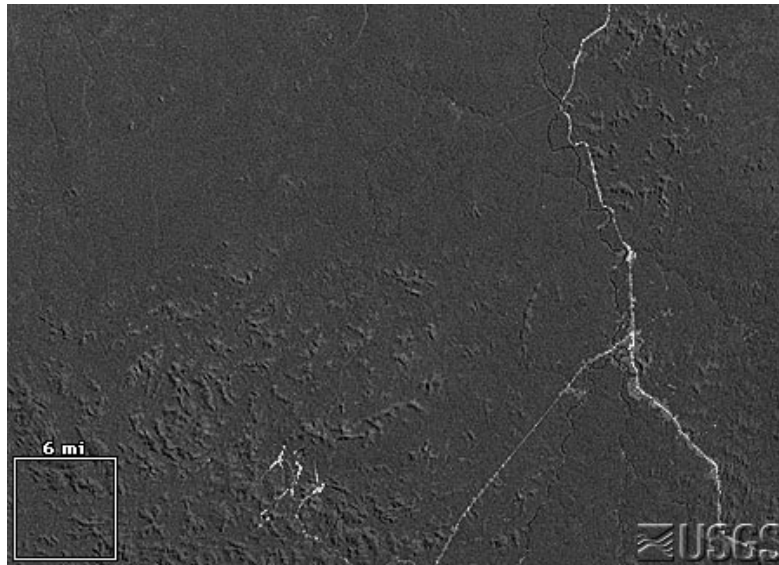
Social Studies School Service

This map shows the same region about 1000 years later and illustrates the changes that occurred in boundaries and rulers.



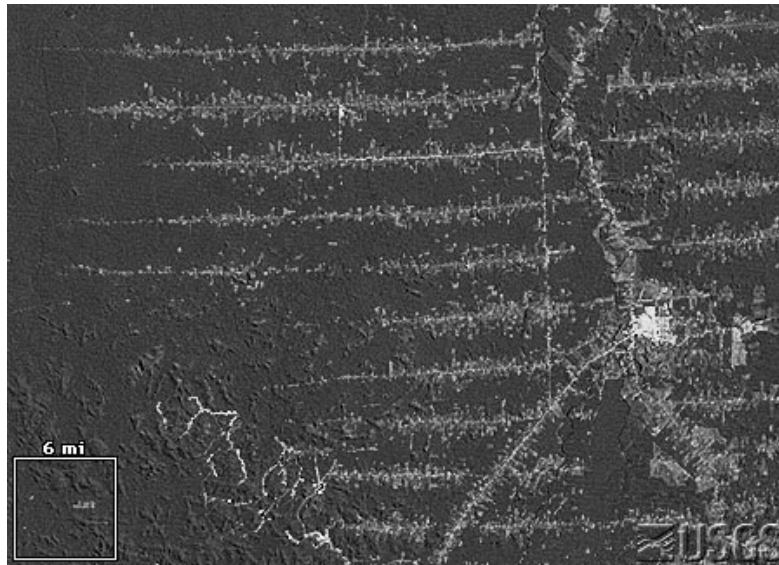
Social Studies School Service

Each of these maps illustrates something of historical importance. Taken together, they're even more effective because they show change over time.



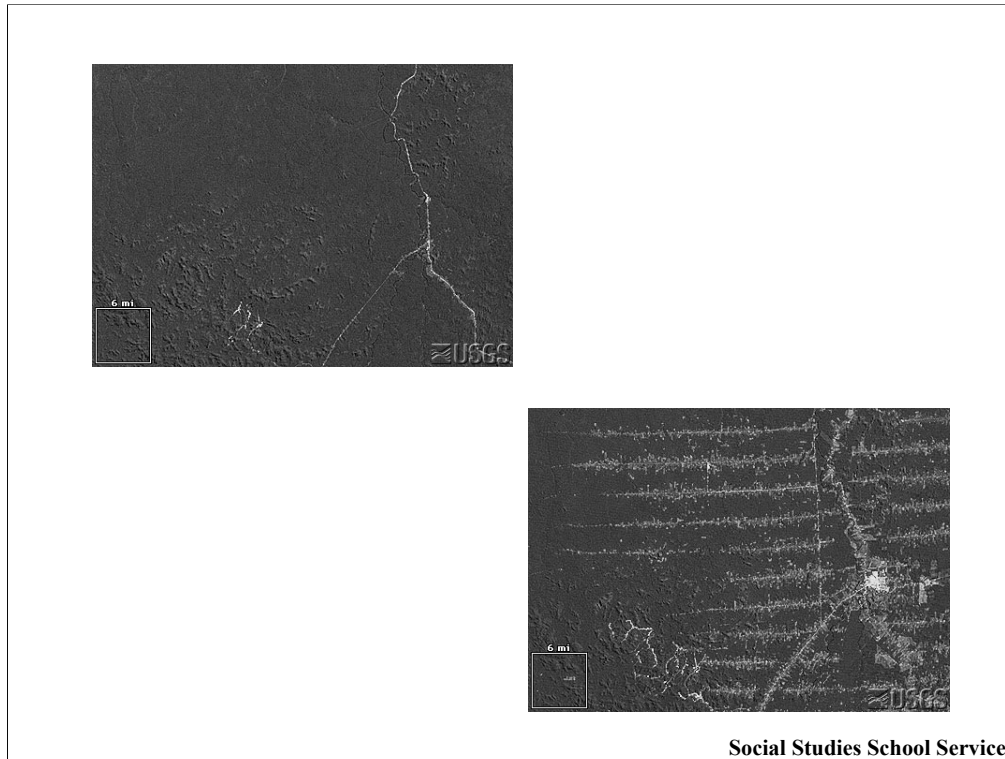
Social Studies School Service

Satellite images also show change over time, sometimes in dramatic ways. This slide shows a satellite image of Rondonia, Brazil in 1975. At that time, this area was almost completely covered in tropical rainforest (in satellite images, red represents vegetation).



Social Studies School Service

By 1986, this area of Rondonia had suffered significant deforestation, as indicated by the green areas. Loggers built roads then cut outwards from these roads into the forest, which is why many of the green areas appear as straight lines.



These satellite images, particularly when shown together, indicate change over time and help the viewer see firsthand what has occurred (and is still occurring) in Brazil's tropical rainforests.



Social Studies School Service

Cities have changed over time, too. As people have developed increasingly efficient agricultural technologies, the demand for farm labor has dropped dramatically, and many people have moved to the cities.



Social Studies School Service

This process began at the dawn of the Industrial Revolution in the late 18th century, and increased rapidly during the 20th century in the United States, Europe, and other developed regions of the world.



Social Studies School Service

Cities initially developed when agriculture enabled people to give up the nomadic hunt for food; instead, they grew and stored food surpluses. Over the centuries, cities grew into centers of commerce, trade, and leadership. As the Industrial Revolution progressed into the 20th century and cities became more crowded, the downtown areas began to reach upwards, first with multistory wood and brick structures and then with steel skyscrapers.



Social Studies School Service

Over the past few decades, increasing numbers of people have left city centers and urban neighborhoods to settle in the suburbs. Metropolitan areas have become more suburb-focused, and many people no longer have to leave the suburbs to go to work.



Social Studies School Service

As settlement patterns have changed, so have people's attitudes toward places. For example, early 19th-century Europeans and Americans tended to think of mountains as dangerous, foreboding landscape features that served no purpose other than to block migration paths and get in the way of farming.



Albert Bierstadt,
Cho-Looke, the
Yosemite Fall, 1864

Social Studies School Service

Thanks to artists, writers, and others of the Romantic era, by the end of the 19th century many people had begun to view the mountains as beautiful. Some people even began to appreciate the recreational opportunities the mountains offered.



Social Studies School Service

Historically, advertisements and promotional materials have greatly influenced people's attitudes toward specific places. The broadside pictured in this slide encouraged newly freed slaves in the South to come and settle in Kansas.



Beauty . . Grace . . Speed . . Power

Patroness of Travel, the living Spirit of modern Railroading
beckons into the fairyland of the Rockies.

Social Studies School Service

Similarly, this ad for the Denver and Rio Grande Railroad (printed between 1925 and 1930) tried to entice travelers to explore the Rocky Mountains via rail. How do you think this ad might have made easterners feel about the Rocky Mountain region? If you lived in New York City in 1926 and saw this ad, how might you have reacted? Do you think an ad like this can change people's impressions of a place? Could this type of ad encourage someone to move to the Rockies?



Social Studies School Service

Attitudes toward natural resources have also changed over time and have differed with various groups of people. For example, Native Americans of the present-day northeastern United States hold different views on how best to use the resources provided by the forest than did the European colonists who arrived in the early 1600s. While the Native Americans tended to rely on the forest for many of their basic necessities, the colonists more often cut the forest in order to create farm plots.



Social Studies School Service

Geography has played a crucial role in the outcome of countless historical events. Terrain, weather, wildlife, and many other geographical factors have contributed to or hindered people's movements and actions, affecting battles, migration, farming, and a variety of other events and patterns.

For example, swarms of locusts have wreaked havoc on farm crops for millennia, sometimes destroying sources of income and contributing to famine.



Social Studies School Service

Weather played a role in the fate of the Spanish Armada, which Spain's King Philip II sent to invade England in 1588. The English fired upon the Armada, inflicting severe damage and dispersing the fleet. As the ships fled the northern waters, a major storm arose, destroying many of the Spanish provisions and forcing some of the ships to land on the coasts of Ireland and Scotland, where many Spanish were killed. Although the Spanish lost the battle before the storms arose, the weather further damaged the Spanish fleet, greatly weakening Spain's military power.



Social Studies School Service

Another example of weather playing a role in important historical events occurred at the onset of the D-Day invasion, when American and British troops invaded the Nazi-occupied Normandy region of France during World War II. In early June 1944, a few days before the invasion had been originally scheduled, General Eisenhower, British Prime Minister Winston Churchill, and top generals met to discuss the weather forecast, which called for heavy storms in northern France. With fewer than 24 hours left to go and severe weather roiling the English Channel, Eisenhower had to decide whether to commence the invasion or wait a couple weeks for favorable tides to appear again. The weather forecast called for a break in the storms, and Eisenhower went ahead with the invasion, which ultimately led to the Allied victory in Europe. If the storms had not broken (or if Eisenhower had called off the invasion), the outcome might have been very different.



Social Studies School Service

Physical features other than weather have also affected the outcome of historical events on many occasions. For example, the Lewis and Clark expedition had to traverse numerous physical barriers, including the desert-like plains of eastern Montana and the Bitterroot Mountains. Had the expedition been less adequately prepared—and if they hadn't received plenty of help from Native Americans—they may have perished or been forced to abandon their mission.



Social Studies School Service

This slide shows a very famous painting by Emanuel Gottlieb Leutze titled *George Washington Crossing the Delaware*. Morale had been waning among Washington's troops, and the icy Delaware River served as an obstacle to Washington's plan to attack New Jersey. On the bitterly cold night of December 25, 1776, Washington led his troops across the river. The crossing was difficult but successful, and the troops marched through the night to Trenton, where they took the Hessians (German mercenaries fighting on the British side) by surprise. The Delaware River posed a significant barrier to Washington's goals that winter, but he took a chance and it paid off.



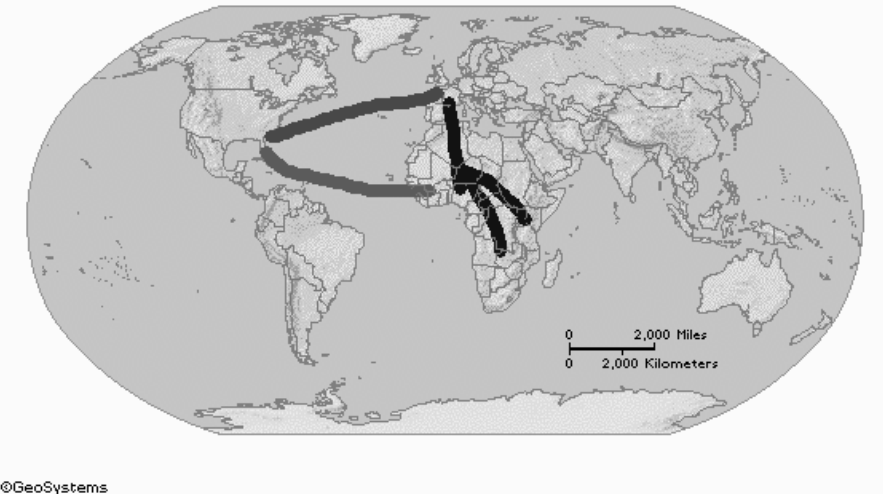
Social Studies School Service

In addition to influencing the outcome of wars and journeys of exploration, geographical features have been important in determining where people choose to settle. People tend to settle near reliable water sources and in areas where the soil is fertile enough to sustain crops. Of course, new settlers to a region cannot always tell if the water will be reliable or if the soil will be good, so they must often learn by trial and error, moving on to a new location if their current one proves unsuitable.

American pioneers settling in the West sought out major rivers, such as the Platte and its branches, and areas that were flat enough to farm.

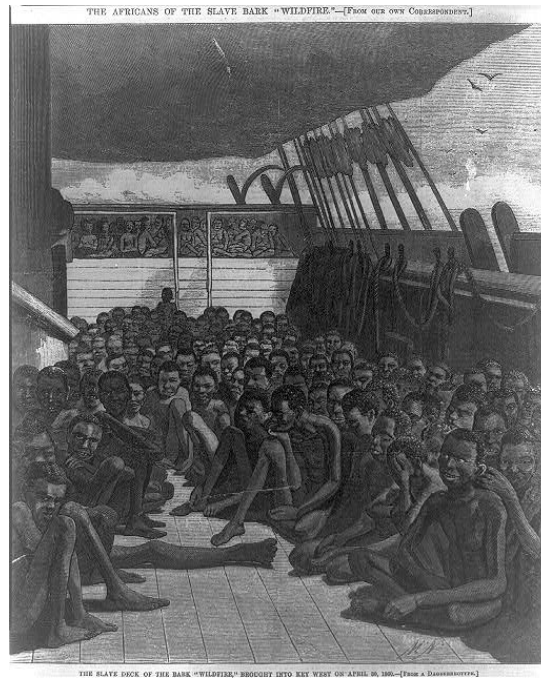
What other geographical factors do you think would have been important in choosing where to settle?

The World



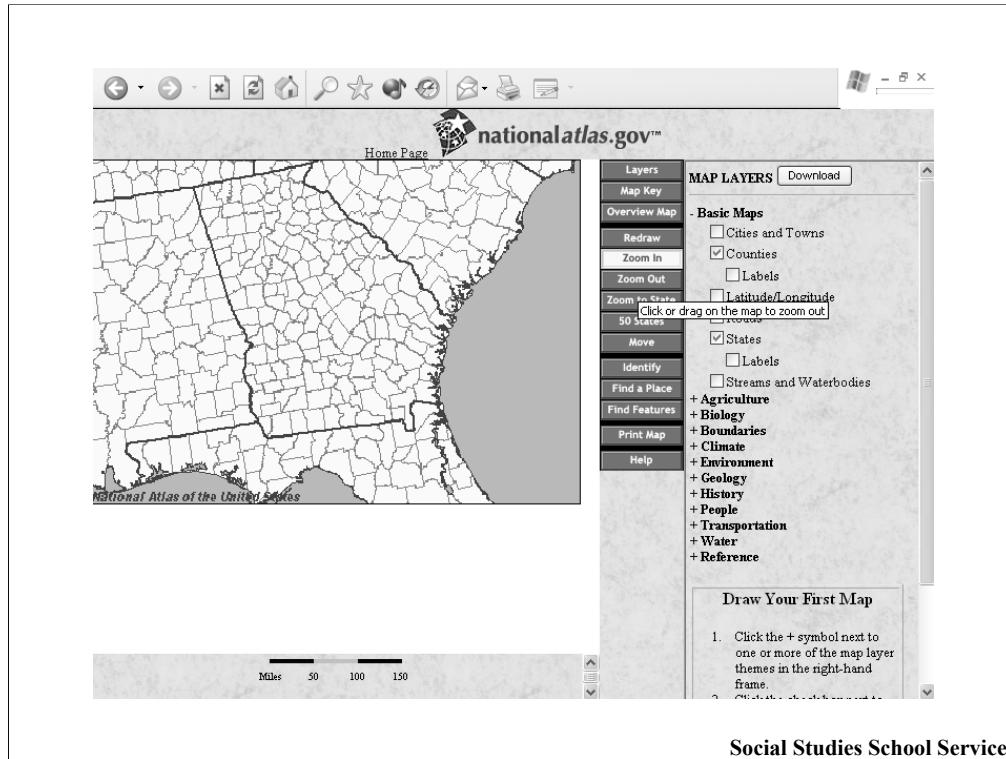
Social Studies School Service

Geographical factors have also influenced economic systems. For example, the notorious historical trade route of the 1600s and 1700s known as the “triangular trade” involved Europe, Africa, and North America and the Caribbean. European countries obtained slaves from Africa and sent them to work on the farms and plantations of the Caribbean and the present-day southeastern United States. These farms and plantations relied on slave labor to grow cotton, tobacco, and other crops. Growers sent these crops back to Europe, where they were manufactured into clothing and other goods. The money from these manufactured goods was used to fund the capture of more slaves in Africa, and the cycle continued.



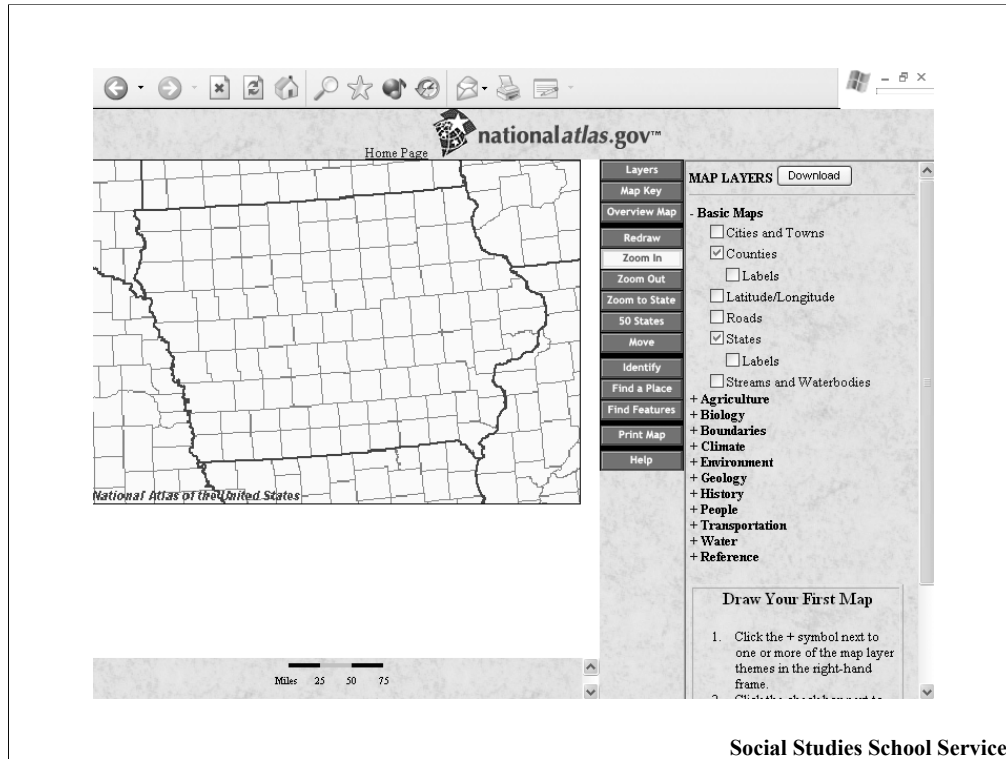
Social Studies School Service

If geographical factors had been different—if the American Southeast hadn't provided ideal conditions for farming cotton and tobacco, two highly labor-intensive crops; if wind patterns had not made the passage from Africa to North America relatively easy for ships; if geographical barriers had prevented the Europeans from exploring and colonizing Africa—then the triangular trade might not have worked, many Africans might not have been forced into slavery, the Civil War might not have occurred, and a myriad of other things might have changed as well.



Human decisions on how to divide the land have also played an important though not quite as prominent role in the course of history and government. For example, many of today's counties, townships, and other political divisions still follow lines drawn from surveying methods used in earliest of the United States.

Georgia and the other 13 original colonies were divided into sections based on the "metes and bounds" system. Boundary lines were determined in part based on geographical features such as rivers, streams, trees, ridges, and roads. This system accounts for the asymmetrical boundaries of many of Georgia's counties.



Social Studies School Service

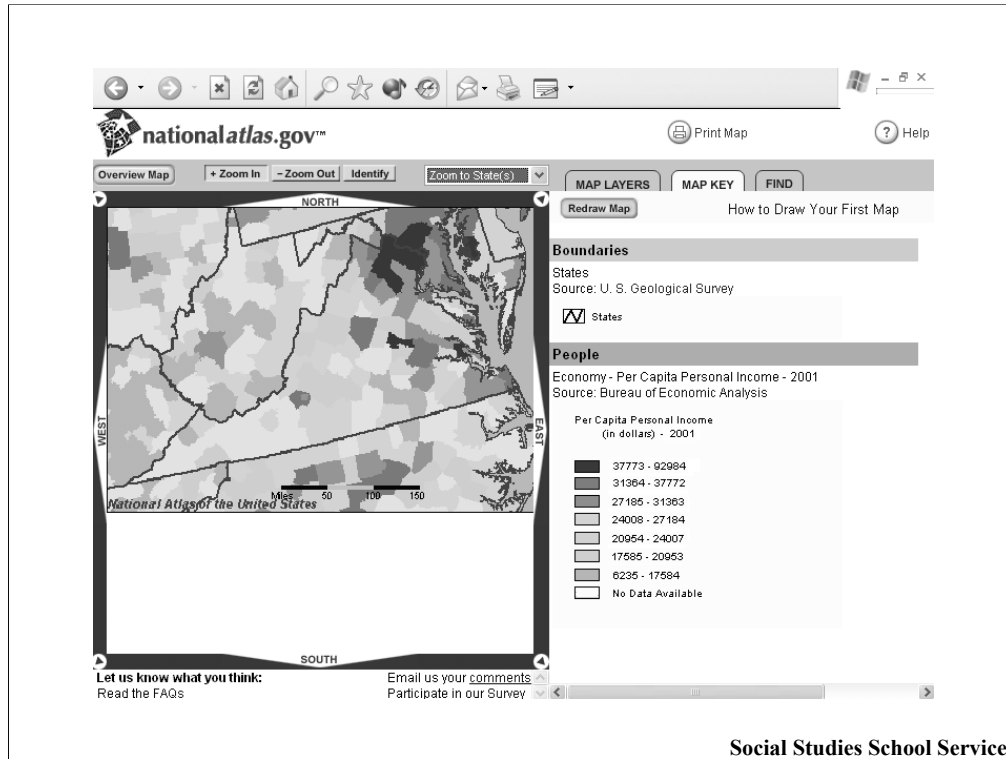
In contrast, Iowa and most of the states that entered the Union after the original 13 colonies set county boundaries by using the U.S. Public Land Survey System, creating rectangular plots divided relatively evenly throughout the territory. Thus, Iowa's counties don't follow natural landscape features.



Social Studies School Service

(Geography Standard 18)

Understanding geography, including physical and human systems and the relationships between the two, can be invaluable in helping to interpret the present and plan for the future.

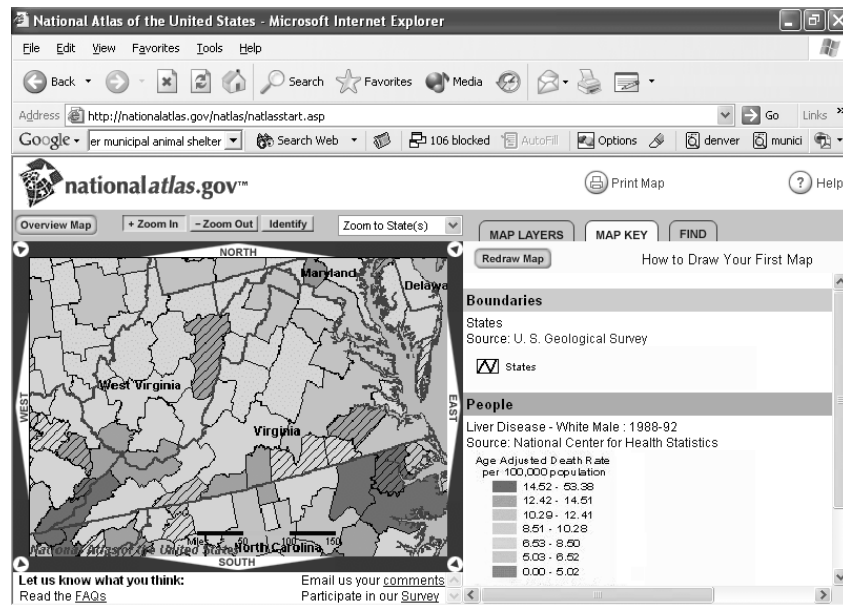


Thematic maps provide important tools for understanding patterns of many different human and environmental factors. The map in this slide shows the 2001 per capita incomes of Virginia and West Virginia. The map key indicates that red areas had the highest per capita income, green areas had the lowest, and yellow areas were in the middle.

Northeastern Virginia (in the upper right of the map) consists of suburbs of Washington, D.C. Western Virginia and most of West Virginia are located in the rural Appalachian Mountains.

What patterns does this map indicate? Which areas are the most affluent? Which are the poorest?

What does this map suggest about the relationship between income and whether a person lives in a rural or a suburban area?



Social Studies School Service

This map shows incidences of liver disease in white males in Virginia and West Virginia. (The maps for black males and white and black females appear similar, although less data is available for these populations).

The map key shows that the darkest brown areas have the highest incidence of liver disease, the blue and teal areas have the lowest rates, and the tan and grey areas are in the middle.

Liver disease in the United States is usually linked to alcohol abuse or the hepatitis C virus. From looking at this map and the previous one, what can you determine about the relationship between liver disease and income? What can you infer about the relationship between alcohol abuse or hepatitis C and income? What can you infer about the relationship between liver disease and living in a rural versus a suburban area?



Social Studies School Service

Think about some of the things you know about your town, such as patterns of income distribution, transportation routes, or the location of hospitals or schools. What thematic maps could you create to illustrate relationships between these factors (e.g., the relationship between income levels and access to hospitals)?



Social Studies School Service

We can also analyze geographical factors by thinking about how certain physical features affect people's lives today and how they might affect lives in the future. For example, how are we affected by the use of energy resources such as fossil fuels, uranium (in nuclear energy), and the sun? Each type of energy impacts individuals and society as well as the environment.



Social Studies School Service

How does the use of fossil fuels impact our lives? What do you think life in the United States or Canada would be like if the supply of fossil fuels were severely limited? What changes would people have to make in their everyday lifestyles? How else would society have to adjust? How do you think the depletion of fossil fuels would affect people in other parts of the world?



Social Studies School Service

Solar panels absorb energy from the sun. They are currently quite expensive, although people who install them in their homes eventually end up saving money because they no longer have to pay gas and electric bills. The technology exists to make solar power a much more common energy source. Unlike fossil fuels, the sun provides renewable energy and doesn't emit harmful byproducts into the atmosphere.

If we used solar power for more of our energy, how might this affect the economy, the environment, and society?



Social Studies School Service

What would you need to know in order to determine where to place a power plant in your town? What about a landfill? A big hospital? A high school? Every time a new facility is constructed, people must analyze geographical factors in order to decide the best location in which to build it. These factors include the location of water sources, access to transportation routes, land values and ownership, potential environmental impacts, political considerations, and community involvement.



Social Studies School Service

Which parts of your town would most benefit from new or expanded transportation routes, such as new roads and highways, bus lines, or light rail? How could you use a map to help answer this question? What other methods might you use besides analyzing maps? Consider the value of surveys, analyses of current transportation usage, and studies of physical landscape features that might either assist or hinder the improvement of transportation.

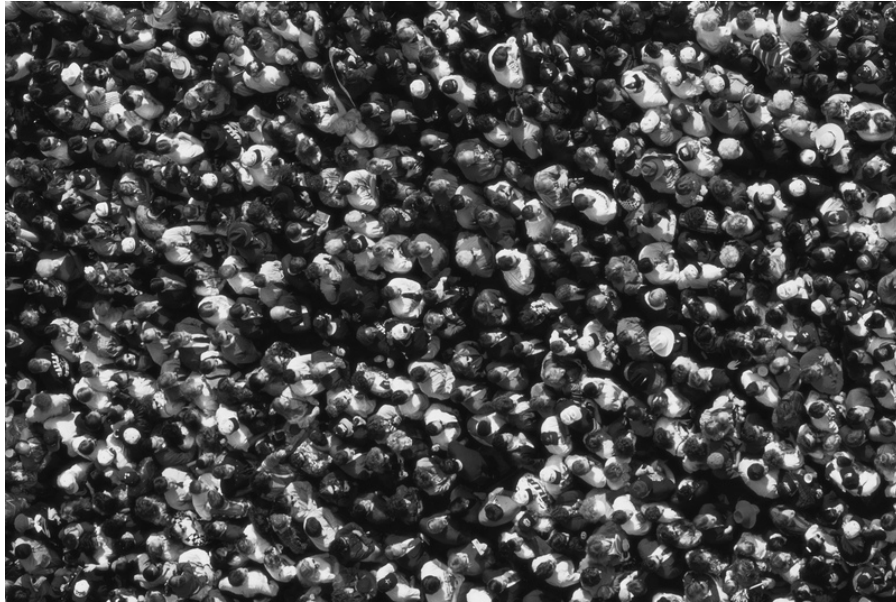


Social Studies School Service

We can use geographical information to help us predict future trends around the country and the world. For example, we can examine current resource use, migration patterns, political trends, and other factors to help determine what human settlement will look like in the future.

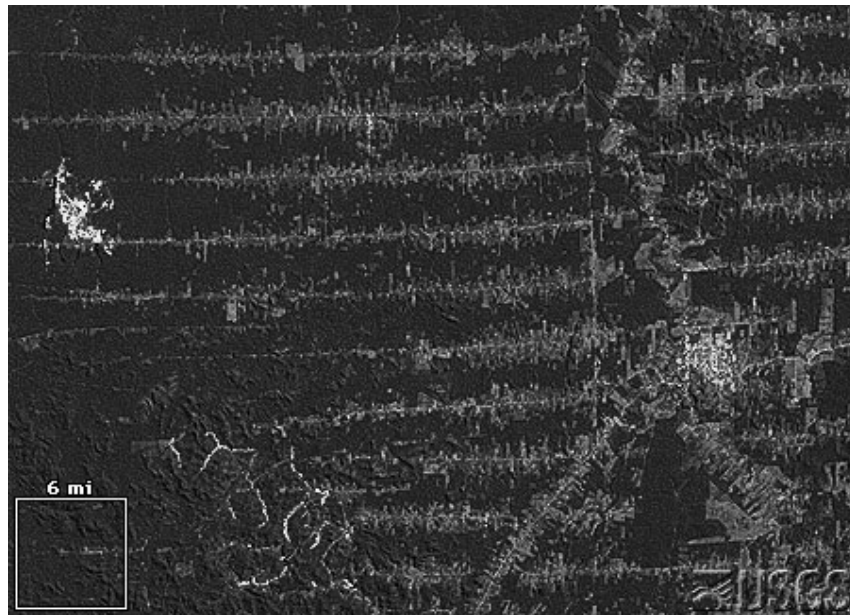
We can also create scientific models that consider several possible scenarios. A model might first assume that our current practices and habits will continue. By putting different data into the model, we can predict how changes in current practices might affect things in the future. For example, say a model assumes that people in arid regions will continue their current rate of population growth and development without changing conservation strategies, thus increasing their need for water. The model would also allow for the possibility that new methods of water conservation could be developed to save this precious resource in arid lands. We could then generate several different scenarios for future settlement patterns in arid regions based on different levels of demand for water.

What might these hypothetical settlement patterns look like? Imagine a place like Colorado's "Front Range," which includes Denver, Fort Collins, Colorado Springs, and many smaller towns, which has seen tremendous population growth in recent years despite an urgent shortage of water. What differences might exist in this area if people and governments continue to increase their demand for water instead of trying to conserve it?



Social Studies School Service

In 1999, the world's population reached six billion people. Accounting for the net total of births and deaths, more than 72 million people were added in 2004. How might rapid population growth affect your town, your state, the entire country, other parts of the world, or the world as a whole?



Social Studies School Service

In what ways might rapid population growth affect the environment? What other factors could have an impact on the environment?

If we continue to use natural resources at the rates we do today, the environment will suffer severely.

Earlier in this presentation, we examined this satellite image of Rondonia, Brazil in 1986. The red areas represent places where forest still exists, and the grey/green areas represent roads and tracks that loggers cut into the forest. A satellite image of the same area in 50 years will have much more grey/green unless the nations of the world find a solution to the complex problem of tropical deforestation.

Deforestation occurs for multiple reasons, including the desire of local people for cash income, the perceived need to clear the forest to farm, the ability of large logging companies to cut huge areas of forests, and the inability of governments to agree on safeguards for the rainforest. What do you think would be the best way to combat each of these problems?



Social Studies School Service

A popular idea for reversing or improving environmental degradation involves convincing a country, region, or community to encourage tourism of environmentally endangered areas. Some countries, such as Costa Rica, have billed themselves as “ecotourism” centers, to which people flock to enjoy activities such as birdwatching and hiking. While many “ecotourism” lodges do less harm to the environment than traditional hotels, some do not. Tourism in any form impacts the environment, but some types of tourism can be more detrimental than others.



Social Studies School Service

What environmental impacts do you think large resort developments, such as this one in Cancun, Mexico, have on the environment? Think about the basic things required and used by guests of these resorts: water, food, sewage infrastructure, recreational opportunities.



Social Studies School Service

How might a cruise ship, which offers the same types of amenities as land-based resorts, impact the environment through which it travels?



Social Studies School Service

How might popular recreational activities impact ecosystems?



Social Studies School Service

Tourism impacts not only the environment but also the people who live in the area. In developing countries, tourism can provide much-needed jobs and income. Many hotels are owned, however, by American, European, or Japanese companies that do not invest heavily in the local communities. Thus, a hotel maid in Cancun might return home each night to a neighborhood that has no plumbing, sewage treatment, or clean water. Local residents do not always benefit significantly from the large revenues generated by the tourism industry.



Social Studies School Service

What role do you think tourism should play in the future? What types of tourism should governments encourage? What changes should be made—if any—to the way tourism is developed and practiced today?



Social Studies School Service

Think about your own town. What steps do you think should be taken to improve the environment in and near where you live? What do you see as the most pressing environmental problems in your area?



Social Studies School Service

Many towns work to improve the quality of their natural environment through recycling programs, parks and greenbelts within and around the city, public transportation, bicycle and walking paths, and water quality safeguards. Has your town implemented any of these? Has it made improvements to these things in recent years? Where could you go to find out more information? Based on what you know now, which of these improvements do you think should be priorities for your town? Can you think of others your town should consider?



Social Studies School Service

In addition to managing environmental problems and analyzing geographic factors to find solutions to those problems, cities and towns also prepare for natural disasters. Scientists, government officials, and volunteers work together to evaluate risks and determine the best way to deal with those risks. Officials use maps to figure out where people should go if they have to evacuate their homes, and to target which parts of town have the greatest risk of fire, flood, or other disasters.



Social Studies School Service

What would people in your town do in the event of a natural disaster? Where would people go, and how would they cope with the situation? Are you aware of any specific plans to help your town prepare for an earthquake, hurricane, flood, or other type of natural disaster most likely to strike your area?



Social Studies School Service

You probably know that different people can have very different perspectives and attitudes toward places. Some tourists may love beach resorts with big hotels, while others may prefer quieter escapes. Local people in resort areas also have different opinions about the resorts; these differences depend on things like a person's source of income, social class, and other factors. People who work at the hotels may greatly appreciate having a job, but at the same time they may resent the tourists' relative affluence. They probably see the region in which they live in a very different way than tourists do, just as you perceive your hometown differently from someone just passing through.



Differing perceptions of and attitudes toward places also appear in the disagreement that exists over how best to use and manage U.S. national parks. Some people feel that national parks should remain as free from development as possible and that as much land as possible should have official “wilderness” status. Others believe that national parks exist for human enjoyment and should therefore accommodate a wide range of activities, including driving, boating, fishing, and even hunting. Some people favor the increased privatization of park services; others loathe the thought that private companies might claim exclusive domain over any of the national parks’ services and despise the idea of having advertising within the parks.



Social Studies School Service

The National Park Service, according to the Organic Act of 1916 which created it, aims to “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

What does this statement mean to you? Should national parks emphasize wilderness and prevent people from entering certain areas or only allow them to travel through these areas on foot? Should parks be made as accessible as possible to humans? Should any type of outdoor recreation be permitted in national parks or should parks only allow certain activities? What contradictions exist within this statement?



Social Studies School Service

How might such a statement assist or hinder efforts by the National Park Service and other organizations and agencies charged with making plans for the parks and their visitors? What would you do if you were in charge of deciding how to handle common park problems like traffic congestion, smog, noise pollution, and damage to ecosystems?

Park planners use statistics collected by a variety of methods, including scientific research and demographic studies (e.g., how many people enter the park each year and what they do when they're there). They are also required to consider the wishes of the current presidential administration; since the National Park Service is part of the Department of the Interior, it receives orders from the Secretary of the Interior, who is appointed by the president. What difficulties do you think go along with the job of national park planner?