

## Understanding the Geography Standards for teachers in grades 6-8

Geography is about the earth we inhabit and what we do with it. Like all subjects, geography involves a distinctive approach to acquiring knowledge and understanding. That approach stresses the significance of *where* events (people, places, things) occur, how they got there and how they are related to other events elsewhere. When John Snow sought to understand an outbreak of [cholera in 19<sup>th</sup> c. London](#), he looked at where the deaths occurred and discovered they clustered around a local water pump. Removing the pump handle ended the outbreak. After [Delaware Route One](#) was completed, debate arose about where the off-ramps had been constructed and whether others in the Townsend area should be added. Because off-ramps bring development, their location is critical to controlling or encouraging growth in southern New Castle County. *Where* matters. Society, businesspeople, parents, and students all make location decisions constantly. Where should I shop for a car, what crop should I raise here, where should we draw a school's attendance boundary?

Geography examines the consequences of those decisions. It allows us to understand how human society has arranged itself over the earth's surface, how [Amazon forests](#) have been turned into cattle pastures, how superhighways make neighbors of once distant Los Angeles and Phoenix, why Central Americans risk their lives to grow [coffee on the slopes of active volcanoes](#). An enduring theme of geographical understanding is the different ways human cultures have responded to, and changed, the physical environment.

Too often, [geography](#) is thought of as a listing of places and products, or at best, the study of how topographic features such as mountains have constrained human actions. The geography standards reject rote memorization and a restricted outlook. Instead, they call for students to use the geographic approach with its key issue of why events occur where they do to help us understand how we have organized our land and life across the earth's surface and what that organization means for our future. Knowledge and insight come from examining events in terms of *where* they occur. The forces composing the natural environment may constrain human behavior, but, increasingly [human culture](#) makes significant changes to the natural environment: distinctive places result from this interaction.

### Goal Statements for the Delaware Geography Standards

- Students will possess a knowledge of geography and an ability to apply a geographical perspective to life situations. All physical phenomena and human activities exist in space as well as time.
- Students will study the relationships of people, places, and environments from the perspective of where they occur, why they are there, and what meaning those locations have for us.
- Students with the knowledge and perspectives of geography will understand the environmental and human processes that shape the Earth's surface, and recognize the culturally distinctive ways people interact with the natural world to produce unique places.
- Students with an appreciation of the nature of their world and their place in it will be better prepared citizens for a physical environment more threatened and a global economy more competitive and interconnected.

**GEOGRAPHY STANDARD ONE: Students will develop a personal geographic framework, or “mental map,” and understand the uses of maps and other geo-graphics [MAPS].**

There are two parts to Standard One. In part one, a **mental map** is a person’s internalized picture of a part of the Earth’s surface. It contains our knowledge of the *relative position* of places as well as knowledge of their physical environments and cultural characteristics. Most people develop several mental maps at different scales and with varying levels of detail: local maps of one’s immediate environment, regional maps of the familiar parts of a country, and national and world maps. The sum total of these mental maps represents a person’s geographical factual knowledge. It allows a person to find their way in the world as well as respond with understanding to political, cultural and environmental events. How concerned should a U.S. citizen be about a Tsunami in the Indian Ocean or a coup in Zimbabwe?

Much of the information in a mental map can be found in a good atlas or by examining a globe, but these should be reinforcing tools, not substitutes. In history, seeing the connections across time comes from a basic familiarity with historical events, not constant recourse to an almanac. Similarly in geography, discovering the relationship of events across earth space requires some understanding of the nature of places and their distances from one another.

Mental maps form slowly and come, not from memorization, but from familiarity. One rarely memorizes a neighborhood’s street names and the orientation of one street to another. Rather, constant movement within the neighborhood brings it into mental focus. Mental maps of more distant world regions are best acquired through analyzing geographic problems. The domestic conflicts over the Vietnam War were in part about the extent to which Vietnam and its neighbors registered on the average American’s mental map. Exploring the place of Vietnam and its proximity to China and the rest of south-east Asia allows at least a more reasoned basis for evaluating the claims of the “domino effect.” Similarly, the relationship of Kuwait to Iraq and its proximity to Persian Gulf oil routes would help an understanding of the basis for the First Gulf war.

A student’s mental maps from local to global scales could contain an infinite variety of information, but at a minimum, they should reflect an idea of the distance and direction of one place from another. Major places should be noted, along with their general economic activities and cultural characteristics (religion, language, political orientation). Also considered should be their proximity to major landforms (rivers, mountain chains) and the climatic zones in which they fall.

A second part of the standard addresses the **use** of maps and other geo-graphics. A map is a way of selecting and compressing a large amount of data about where events occur on a sheet of paper that represents a part of the earth’s surface. The map uses symbols to represent human actions or physical features, and allows the viewer to gain an overview of an area that would not be possible from the ground. It is like looking down from several thousand feet - or miles - above the earth. Other geo-graphics include globes, and aerial photographs that use either natural or false colors. The latter involve special film sensitive to particular electromagnetic wavelengths. Thus, a river may appear blue on the photograph but streaked with red by polluted water that

reflects a wavelength different from fresh water, even though the differences are indistinguishable to the naked eye.

Maps are used to undertake geographic analysis. Mapped information can be viewed as patterns of data, just as John Snow uncovered patterns of dots. The patterns convey meaning. For instance, a map of U.S. teenage birth rates showed that almost all the states across the South had higher than average rates while northern states had lower than normal rates. Such a contrasting pattern provokes a wide variety of explanations as well as an incentive for further investigation. Today, much geographic information (events, where they occur) can be digitized in a Geographic Information System (GIS). GIS analysis allows two or more maps to be laid on top of each other so that a number of variables can be examined together. A map of public libraries, each with a circle around them representing a reasonable distance for patrons to travel, can be superimposed on a map of urban population. Inevitably, some population areas will be excluded from any of the circles. A GIS allows an instant count of how many people are excluded, permitting policymakers to decide if enough unserved people exist to support a new library and where it might best be placed.

Maps have the same limitations and potential for misuse as statistics. They cannot represent all aspects of that part of the world they encompass. Instead, what is portrayed is selected by the mapmaker and subject to that person's biases. A map of the U.S. African-American population by county will display one pattern of high and low density areas if *absolute* numbers of African-Americans in each county are used, and a different pattern if the *percentage* of African-Americans in each county is selected. The South Korean government has long lobbied nations to call the sea between it and Japan the "East Sea" rather than the more common "Sea of Japan." A map reflecting the name change could have serious policy implications for the mapmaker.

### **Enduring Understandings**

Students will understand that:

- Mental maps summarize differences and similarities about places. These differences and similarities lead to conflict or cooperation and the exchange of goods and ideas between peoples.
- Mental maps change as the scale moves from local to global; we know more about our home area than more distant places; and these differences affect how we feel and behave towards places that are distant versus those that are close.
- The ways mapped patterns are analyzed and used help solve societal problems.
- Maps can be used to distort or introduce bias into the information they portray.

**Geography Standard One 6-8a: Students will demonstrate mental maps of the world and its sub-regions which include the relative location and characteristics of major physical features, political divisions, and human settlements.**

### **Essential Questions:**

- Why does *where* matter?
- To what extent are mental maps of different scales linked?
- To what extent are human settlements connected?

At this grade level, what changes is an expansion of the areas covered by mental maps to sub-regions of the world beyond North America, and finally to the world as a whole. In other respects, there is no difference between the objectives and purposes of the 4–5 and 6–8 benchmarks. Once again, the level of detail of the mental map components for the world’s sub-regions is similar to that of the United States. The [South American](#) continent provides an example. A mental map would recognize the long Andes mountain chain that runs across the north and down the west side of the continent, separated in Bolivia by a high plateau containing Lake Titicaca. To the east of the Andes lie the Guiana Highlands and Brazilian highlands, separated by the Orinoco and Amazon river systems. The southern Brazilian highlands are drained by branches of the Parana-Paraguay river system that terminates in the Río de la Plata. Inland from Buenos Aires lies the flat pampas, and to the south, the arid plateau of Patagonia. Climatically, most of South America east of the Andes experiences tropical weather: warm temperatures throughout the year with wet and dry seasons. To the west, from northern Peru to Central Chile lies the dry Atacama Desert. A major concept embedded in human adaptation to the natural environment is the role of altitude that modifies the tropical climate otherwise expected at low latitudes and allows raising mid-latitude crops in small micro-ecologies found at higher elevations. Argentina, Uruguay, and Chile are the only South American areas of temperate, mid-latitude climate. Chile is like the U.S. west coast, and Argentina and Uruguay are like the eastern U.S. seaboard. South Americans live disproportionately in major cities. A mental map of the sub-region would include at a minimum Caracas, Rio de Janeiro, Sao Paulo, Buenos Aires, Montevideo, Santiago, Lima, and Bogotá.

Again, it must be stressed that while mental maps carry factual details, these are best learned in the context of examining issues related to those regions. For instance, the travels of [early explorers](#) can be traced and the diversity of findings made understandable. Alternatively, areas most likely to appeal to tourism could be hypothesized.

Familiarity with sub-regions allows speculation about future connections. How might the economies of Africa and South America or Africa and India be better linked? Is there a basis for trade (exchange) between these connections? What are the obstacles to greater economic unity among South American countries? Is the lack of interior rail connections across country borders a factor?

**GEOGRAPHY STANDARD TWO: Students will develop a knowledge of the ways humans modify and respond to the natural environment [ENVIRONMENT].**

The key to Standard Two is the idea that the relationship between the natural environment and human culture is a two-way street. Too often, only one part is asserted: that the form of the natural environment influences (in extreme cases, determines) the human culture of a place. Mountains may prove obstacles to communication, but transport technology overcomes the barriers. Climate may limit the growth of certain crops, but irrigation or greenhouse protection can extend a plant's natural limits. That is not to say that the natural environment does not pose risks: hurricanes, earthquakes, volcanic eruptions, or droughts all pose risks to human settlement. But as human technology expands, people are able to adapt to the constraints once placed by the natural environment. In the early 20<sup>th</sup> century, Arizona's aridity limited farming communities to isolated oases. With irrigation projects from the Colorado River and the invention of air conditioning, major metropolitan populations could be sustained in Phoenix and Tucson.

Besides technological adaptation, human culture has increasingly modified the natural environment, shaping it to its needs. Clearing forests for agriculture, paving surfaces for urban areas, damming rivers, exploiting minerals, polluting air, streams and oceans, are all examples of the permanent changes to the natural world resulting from human culture.

At the center of this standard is the recognition that places are the resolution of the forces of nature and adaptations by human culture. Moreover, as this relationship changes over time, so too do places. For student understanding, knowledge of the forces that shape the natural environment is necessary, and may be gained from both this standard and/or the Science standard, Earth's Dynamic Systems. But what makes Geography Standard Two different from the Science standard is the focus on *how* human culture is both influenced by, and adapts to, the natural world.

**Enduring Understanding**

Students will understand that:

- The human response to the characteristics of a physical environment comes with consequences for both the human culture and the physical environment.

**Geography Standard Two 6-8a: Students will apply a knowledge of the major processes shaping natural environments to understand how different peoples have changed, and been affected by, physical environments in the world's sub-regions.**

**Essential Question:**

- Under what conditions should human cultures attempt to change the processes that shape the natural environment?

This standard differs from the 4–5 level in two ways. While the 4–5 level sought student awareness of the likely consequences of environment-culture interaction, this standard requires students answer those questions by applying an understanding of the *processes* that shape climate and landforms, and vegetation and soils. For instance, the behavior of rivers results in more erosion at higher elevations because gravity causes faster stream flow. At lower altitudes,

stream flow decreases, the ability of water to move larger material lessens, the river meanders more and deposits rather than erodes material. Such knowledge of [the way rivers behave](#) helps to explain flood plain vulnerability to human settlement and often the need to build levees. Similarly, knowledge of the way rising air cools less when precipitation occurs and warms faster when descending helps explain the need for irrigation systems in [rainshadows](#) found on the leeward slopes of mountain chains such as the Andes.

Knowledge of the way environmental processes can affect human culture is only part of this standard. Equally important is the effect human culture can have on those processes. Familiar examples might be the widespread [clearing of tropical forests](#) that reduce carbon dioxide uptake and thereby contribute to higher levels of CO<sup>2</sup> in the atmosphere, a major cause of global warming. Similarly, the [Three Gorges Dam](#) on the Yangtze River will reduce downstream flooding, decreasing the amount of silt deposits that annually fertilize the soils.

A second difference between this standard and the 4–5 level is expanding the geographic area to other parts of the world beyond Delaware and the United States. Again, this development does not assume rote learning, but rather the ability of students to apply their understanding of process. Thus, for instance, while knowledge of river systems may have come from studying the Mississippi, application to the behavior of major rivers such as [the Nile](#) should allow students to understand why 90% of Egypt's population relies on productive soils in the river flood plain, and why the Aswan high dam was built to protect farmers from flooding but in doing so reduced soil productivity.

**GEOGRAPHY STANDARD THREE: Students will develop an understanding of the diversity of human culture and the unique nature of places [PLACES].**

The enduring goals of geography - to apply analysis of the importance of “where” events occur and the way in which human-environmental relations shape the nature of the earth’s surface - are embodied in the first two geography standards. In Standard Three, they are both brought to bear on one of geography’s central, enduring subjects, the nature of places. Places may be defined as locations with character. A place occupies a given location on the earth’s surface – what may be called its *site*. That site contains a unique combination of physical environmental conditions: climate, landforms, soils and vegetation. It also contains people with distinct cultural attributes who modify the environment to create a distinctive place. Places, however, reflect one additional attribute, their location relative to all other places, or their *situation*. Places close together can expect to have more interaction – trade, information flow, and human migration – than places farther apart and thus be more subject to change over time. Isolated places change little. Evaluating a location’s site and situation allows identification of those distinctive characteristics that make it a unique place. New York City, originally located on Manhattan Island, has a poor site, bounded by the Hudson and East Rivers that require numerous tunnels and bridges for connection. But its situation is superior, located at the confluence of the Atlantic Ocean and the Hudson River and (later) Erie Canal that gave the city an ability to reach growing 19<sup>th</sup> century settlements west of the Appalachians in the Ohio river valley. Far surpassing the situation of its rival urban centers, Philadelphia, Boston and Baltimore, it acquired status as the country’s largest city which it has never relinquished.

**Enduring Understandings**

Students will understand that:

- Places are unique associations of natural environments and human cultural modifications.
- Concepts of site and situation can explain the uniqueness of places. As site or situation change, so also does the character of a place.

**Geography Standard Three 6-8a: Students will identify and explain the major cultural patterns of human activity in the world’s sub-regions.**

**Essential Questions:**

- What makes a place culturally unique?
- Under what conditions do cultures spread?

Places across the world differ in large part because of their exposure to different cultures. The major ancient world’s cultures occupied distinct locations called [cultural hearths](#): North China Plain (Chinese); Indus and Ganges (Indian/Hindu); Mesopotamia (Egyptian, Indo-European); Greece, Rome, Saudi Arabia (Islam), Inland West Africa; Highland/Lowland Guatemala (Mayan); Valley of Mexico (Aztec); and Peru (Inca). From these cultural hearths, distinctive languages and religions spread out at different times to encompass communities at various distances away from the center. Students need to understand the geographic origins of the major cultures and the places that came under their influence. They should recognize the patterns of diffusion that were influenced by the presence of trading routes, such as those that [spread Islam](#) across the Sahara from North Africa, or barriers to movement such as the Amazon rainforest that

kept the [Inca](#) culture restricted to the Andes highlands and Pacific lowlands. The concept of *core* (the cultural hearth where the culture has its strongest influence) and *periphery* (the places only lightly touched by the culture) can aid student comprehension in understanding the causes behind the cultural diversity of places.



**GEOGRAPHY STANDARD FOUR: Students will develop an understanding of the character and use of regions and the connections between and among them [REGIONS].**

Just as all people are unique, so are places. And just as it is impossible to understand every person in the world, so it is with the world's places. With people we develop concepts such as communities, ethnicities, religious observance, speakers of particular languages, and social classes to help us make sense of humanity. Similarly, geography has developed the concept of regions to simplify an understanding of places. Regions, unlike places, do not exist; they are a construct or concept. Regions are defined as an area of the earth's surface enclosing places that have some common characteristic. A climatic region may include the area where we find places experiencing a similar climate, such as the tropics; an agricultural region may be an area within which places engage in a similar type of agriculture, such as the corn belt; a political region might be one in which all places are under the jurisdiction of a particular set of laws, such as the United States; an ethnic region might enclose places that house a common ethnic population, such as Kurdistan. If students examine their language, they will see that it is full of regional terms: the "city;" the "suburbs;" my "neighborhood;" "downtown."

An important feature of regions is that although they are a product of a person's mind, once identified they can take on real and universal meaning. We may not know exactly the location of "the South" in the United States, but being "southern" invokes strong feelings pro and con. In Delaware, being south or north of "the Canal" is an important distinction in the minds of Delawareans, although to an outsider, there is no discernable difference between places on either side of Chesapeake and Delaware Canal waterway. Regions are only identifiable once they have discrete boundaries around an area of earth space that separates it from other spaces. Drawing boundaries is often difficult and frequently zones rather than discrete lines are used. Methods of drawing boundaries are an important part of the regional concept.

**Enduring Understandings**

Students will understand that:

- A region is a concept rather than a real object on the ground, used to simplify the diversity of places.
- Regions must have boundaries to exist, yet there advantages and disadvantages associated with any real or abstract feature used to draw a boundary.

**Geography Standard Four 6-8a: Students will understand the processes affecting the location of economic activities in different world regions.**

**Essential Questions:**

- To what degree are economic regions specialized? What's "special" about the region and how could it change?

There are at least three different types of regions that students should understand: *formal* (where the defining features of the region extend uniformly from border to border, such as a legal/political region); *functional* (where the defining characteristic of the region is strongest in the center and becomes less evident towards the edges, such as the reception area for a TV

station); and *perceptual* (a region that exists only in the mind, such as “the South” or “the Far West” with no agreed-upon boundaries).

Economic activities are usually defined in terms of functional regions where the edges are zones rather than single lines. Students should recognize that economic regions are increasingly based on [specialization](#), such as the Ruhr River valley, defined by its coalfields; the Central Valley of California, known for its Mediterranean agricultural products; or Bangalore, India, recently famous for its concentration of high-technology firms and services.

Moreover, students should recognize that specialized regions can be altered by changes in transport technology or politics. For instance, Australia was once a producer of wool until refrigerated ships allowed meat to be supplied to United Kingdom markets. But when the U.K. joined the European Union, market preference was reduced and Australia has now become part of the Asian region, supplying countries such as Japan with needed minerals such as iron ore and coal.

**Geography Standard Four 6-8b: Students will explain how conflict and cooperation among people contribute to the division of the Earth’s surface into distinctive cultural and political territories.**

**Essential Questions:**

- To what extent is territory also an expression of political or cultural identity? How might this view of territory explain conflicts between nations or ethnic groups over space?
- How might territorial identity and claims on land change over time?

An area of the earth’s surface with which people identify culturally or politically is termed a [territory](#). Invariably, a territory is a formal region, defined by specific borders (though not always recognized by neighbors). The space within a territory is often regarded as a part of one’s political or cultural definition. As such, it is exclusive and not able to be shared with others because to do so would dilute the identity it represents. In a perfect world, the world’s political territories would each reflect the sovereignty of the people who occupy them. Unfortunately, cooperation such as that which produces the stable Canadian-U.S. border is not always the norm. Many active and latent conflicts exist in which different people lay claim to the same territory: in Northern Ireland between Protestants and Catholics, in northern Spain between Castilians and Basques, in Israel between Jews and Palestinians. Students should understand that the present-day division of the earth’s surface into political and cultural regions is the result of the *current* consequences of conflict and cooperation between states and ethnic groups. Boundaries between groups have not always been stable, and claims over territory based on the discovery of new resources (e.g., oil) or the movement of people (e.g., illegal Salvadoran settlers in sparsely populated Honduras) can destabilize regional boundaries.