

East Asia and the National Geography Standards

By Ronald G. Knapp

Many questions are asked by teachers, including veterans with years of classroom experience, as they approach new subject matter and unfamiliar academic disciplines: What resources are available for me as I develop unit and lesson plans? What materials are available for my students? What teaching strategies are most effective in helping students learn? Are there national or state standards that provide a guide, and how can I align my teaching to them? New and experienced teachers alike usually focus on how to keep current with pedagogical and content ideas. When teachers must move into a discipline in which they have little or no formal training, such as geography, or an area of the world, such as East Asia, the challenges are substantial.

For many K–12 educators, the 1994 publication *Geography for Life: National Geography Standards* was a catalyst that helped them understand that geography was far more than a *Jeopardy* category and certainly more than a collection of isolated facts about places around the world. *Geography for Life* laid out a roadmap for gaining geographic literacy that went well beyond tips about memorizing place names or filling in blank maps with symbols that, in the popular imagination, still continue to be viewed as the essence of geography. Over the past decade and a half, more and more teachers, as well as the public, have learned to think geographically through workshops and revised textbooks. Many have come to understand the importance of inquiring about why phenomena are where they are and under what circumstances they came to be that way, the “where” and “why there” aspects of geographic inquiry. They have also learned that geography focuses on space, or the spatial dimension, just as history grapples with time, or the temporal dimension. While these concepts are in many ways quite sophisticated, they can be applied at all levels of education using grade-level examples. States are making significant progress in the voluntary adoption of the National Geography Standards that serve as benchmarks for teaching and learning geography for grades K–4, 5–8, and 9–12.

In 1985, the Geography Education National Implementation Project (GENIP) created a consortium of four organizations—Association of American Geographers (AAG), American Geographical Society (AGS), National Council for Geographic Education (NCGE), and National Geographic Society (NGS)—charged with improving both the status and quality of geography education in the United States. As a clearinghouse, GENIP reached out to educators and policymakers to promote standards-based geography instruction. Under the capacious umbrella of the NGS, the Geography Alliance Network and a variety of NGS program communities became collaborative hubs promoting the National Geography Standards with K–12 teachers, college geographers, students, and parents.

In 1987, a joint resolution of Congress and a proclamation by President Ronald Reagan launched Geography Awareness Week. This annual national event during the third week of November draws attention to geographic literacy by encouraging schools and families to engage in educational yet fun experiences. *Asia: Continent of Contrasts*, the 2007 theme, was supported by a comprehensive set of interactive materials that are still available on the NGS website. The current NGS education website includes standards-based activities; guides to geographic concepts; webinars; blogs; and geography-related content that spans the cultural and natural realms, many of which focus on

Asia’s geography. Nearly four million people have joined the NGS Facebook page, which says that the organization “support[s] critical expeditions and scientific fieldwork, encourage[s] education for students, promote[s] natural and cultural conservation, and inspire[s] audiences through new media, vibrant exhibitions, and live events.” Synergies linking popular and academic approaches to geography are at an impressive level never seen before in the US.

Over the past several years, much work has been accomplished in preparing a second, updated version of the 1994 *National Geography Standards*. While the process has been slower than originally planned, a dedicated writing committee has produced a draft that was posted for public comment in June/July 2009. The long-awaited second edition of *Geography for Life: National Geography Standards* will be released in 2011 in a new, more useful format.

To promote the National Geography Standards, I served as the faculty consultant to create a featured module on the Asia for Educators (AFE) website. An initiative of Columbia University’s Weatherhead East Asia Institute, AFE has emerged as a multifaceted resource for educators and students at all levels. Sophisticated, accessible, and visually stunning modules present aspects of Chinese history, with extensive materials on Japan, Korea, and Việt Nam. My module, *East Asia in Geographic Perspective: China, Japan, Korea, and Vietnam*, provides content and approaches about East Asia within the two-tiered framework of the National Geography Standards. Six Essential Elements, which are tagged “essential” because they are indispensable building blocks, encompass eighteen geography standards that incorporate geographic ideas and geographic approaches. Because many teachers are already comfortable with the 1984 Five Themes of Geography—Location, Place, Human-Environment Interaction, Movement, and Regions—as a useful and popular way to introduce geographic concepts, icons referring to them appear next to the eighteen Geography Standards on the AFE website.

Utilizing these materials, I teach a graduate-level online course titled *East Asia: Geographic Perspectives* for Teachers College, Columbia University. In this standards-based approach to the geography of East Asia, its land, water, people, and agriculture, and other topics constitute a background for viewing history, civilization, and contemporary events. Prospective and in-service teachers are encouraged to focus first on two thought-provoking notions: “What is Asia?” and “What is East Asia?” Using concepts derived from *The Myth of Continents* by Martin W. Lewis and Karen E. Wigen, they learn that these “ancient” divisions of the Earth’s landmasses and cultural regions are in fact recent constructs. With a ladder system of texts and images, each of the six Essential Elements and eighteen Geography Standards is then examined.

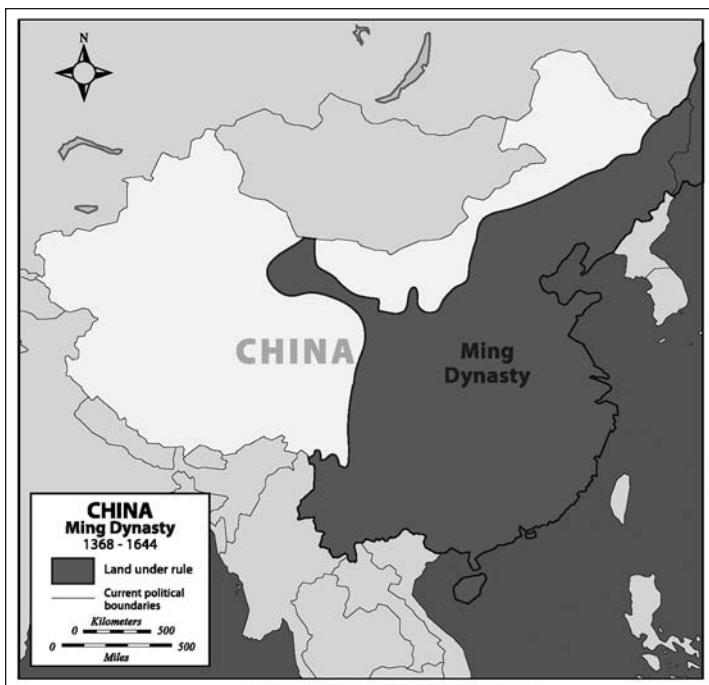


Figure 1: This map shows the extent of China during the Ming dynasty relative to present-day political boundaries and can be compared with dynasties before and after.

Source: <http://www.artsmia.org/art-of-asia/history/ming-dynasty-map.cfm>.

Essential Element A: The World in Spatial Terms

Geography Standard 1: How to Use Maps and Other Geographic Representations, Geospatial Technologies, and Spatial Thinking to Understand and Communicate Information

Standard 1 focuses on maps, aerial photographs, satellite images, and the wealth of geospatial technologies employed in Geographic Information Systems (GIS) that together help us visualize spatial patterns and associations across the Earth's surface. Students are introduced to different types of maps relating to East Asia that portray factors such as politics, population, and topography before entering into a discussion concerning how maps sometimes lie and how most maps should be viewed as mere representations of reality rather than as accurate documents.

Geography Standard 2: How to Use Mental Maps to Organize Information about People, Places, and Environments in a Spatial Context

The notion of "mental maps" that each of us carries in our head is introduced to reinforce questions relating to "What is Asia?" and "What is East Asia?" Teachers and students are encouraged to build mental maps of East Asia that reflect both objective and actual information, as well as more subjective, often imprecise perceptions.

Geography Standard 3: How to Analyze the Spatial Organization of People, Places, and Environments on Earth's Surface

This standard is especially rich because it weaves some fundamental constructs of geographical thinking about points, lines, areas, and volumes—spatial properties that operate at different scales from local to global. Analysis of these fundamental spatial properties is helpful to understand spatial relationships, structures, and processes. Although points, lines, areas, and volumes may seem quite complex at first glance, they are actually quite simple when discussing spatial realities. In Japan, for example,

- Yokohama City can be seen as a "point" at some specified scale that is connected by land, water, and air, which are "lines."
- The Kanto region where Yokohama City is located is an "area," as are other areas to which it might be connected.
- Yokohama Bay on its east can be thought of as a "volume."

Looking at the historical changes in boundaries via a series of maps helps students understand the evolving nature of China as both a civilization and as a political entity.

Essential Element B: Places and Regions

Geography Standard 4: The Physical and Human Characteristics of Places

Differentiating spaces and places is fundamental to understanding geography. Uncategorized areas on Earth's surface, which may be termed "spaces," become "places" and "regions" once humans categorize and name them. At the most fundamental level, distinctions can be made by differentiating and naming water and land, uplands and lowlands, lakes and rivers. Similarly, administrative divisions, such as China, Japan, or Korea's named provinces, help clarify this concept. Robert McColl's "Understanding the Geography of China: An Assemblage of Pieces," which appeared in *Education About Asia* in 1999, further clarifies the differentiating notions of both spaces and places.

Geography Standard 5: People Create Regions to Interpret Earth's Complexity

Regions are named places and are to geographers what eras, ages, and periods are to historians. For historians and geographers, these concepts organize and identify time periods and areas of space/place with shared characteristics. Each of these concepts, region and era, for example, is thus a human construct characterizing time or space. Regions are often hierarchical, nested within one another at different scales as units of Earth space, such as a state and a village or a river and its river basin. Regions are characterized as being either formal or functional. Formal regions are defined by a set of criteria that is relatively homogenous in extent across an area. Examples of formal regions are countries (China, Japan), administrative subdivisions (Tokyo, Hanoi), or physical or cultural areas (Yangzi River Basin, rice-growing area). Functional regions, on the other hand, are organized in connection with a fixed point or node, such as a city, town, harbor, or airport. When lines are connected to and through the points and nodes, the functional regions become apparent on a map. Examples include trade flows, Internet networks, market town networks, and airline systems. The network comprising the fabled Silk Roads is a fine example of a complex functional region.

Geography Standard 6: How Culture and Experience Influence People's Perceptions of Places and Regions

Wherever they are, people vary in how they perceive the place they live, as well as places elsewhere, because of beliefs and actions. Even the names of places—Hiroshima, Hong Kong, Saigon—and sometimes even events—Korean War, Việt Nam War, Sino-Japanese War—convey location-specific attributes shared across cultures, both for those living there as well as people from afar. As teachers and students study distant places like East Asia, they must confront their own accumulated perceptions and strive to comprehend how people living in different places (and at different times) perceive(d) their own lands. Through this effort, students build layers of understanding about East Asia's major river systems, agricultural practices and crops, population characteristics, and distributions.

Essential Element C: Physical Systems

Geography Standard 7: The Physical Processes that Shape the Patterns of Earth's Surface

Even without the presence of humans and their activities, Earth's surface continues to be modified by interactions between and among the atmosphere (weather and climate); the lithosphere (soil formation, earthquakes, erosion, and deposition); the hydrosphere (oceanic circulation and the hydrologic cycle); and the biosphere (animal and plant ecosystems). An understanding of these raw environmental conditions and processes are central to geographic

inquiry. Geographic inquiry eventually leads to an understanding of how humans are affected by specific physical systems, as well as how human actions modify and impact them. Earthquakes, volcanoes, and tsunamis in Japan are notable and of special interest to students. The worldwide concern regarding fresh water, which was the subject of the 2010 Geography Awareness Week, is central to decision-making in China, whether associated with the construction of the just-completed, massive Three Gorges Dam or the current, multi-decade effort to transfer water south to north. River systems and regional hydrology, which are significant in China, Japan, Korea, and Việt Nam, are critical to understanding issues of food security, natural disasters, and even conflict. No one discounts the fact that China has become the largest national source of greenhouse gases because of its reliance on coal to generate electricity and is significantly impacting global climate change. Even the Dalai Lama has been reported as stating that environmental concerns—melting glaciers, deforestation, and polluted water from mining projects—are now more urgent than political issues relating to Tibet.

Geography Standard 8: The Characteristics and Spatial Distribution of Ecosystems and Biomes on Earth's Surface

The ecosystems arrayed across the Earth's surface that consist of communities of plants and animals—including humans—are a dynamic and ever-changing mosaic. In East Asia, many diversified habitats—forests, marshes, grasslands, aquatic ecosystems, as well as coastal ecosystems—have taken shape through the interaction of complex climatic and geomorphic conditions over millennia. Human-made ecosystems—farm fields, canals, parks, and coastal port facilities—have also existed for centuries. The degradation of ecosystems because of changes in agricultural systems, urbanization, population growth, and general economic development is as noteworthy in East Asia as elsewhere in the world. Over the past twenty years, as China's economic development has accelerated, the pursuit of raw materials, such as timber, petroleum, coal, and metals, especially in South America, Africa, and Southeast Asia, has led to the ravaging of ecosystems far beyond East Asia. The global nature of environmental degradation and efforts to achieve sustainable economic development can be understood best by incorporating East Asia in the analysis.

Essential Element D: Human Systems

Geography Standard 9: The Characteristics, Distribution, and Migration of Human Populations on Earth's Surface

The human population on Earth swelled from one billion in 1804 to four billion in 1974, and now is approaching seven billion. China's population, which exceeds 1.34 billion, is the largest in the world. Yet, what is usually not realized is that the .34 billion—what appears after the decimal point—actually exceeds the total population of the US, which is nearly 311 million. Understanding population density, distribution, and dynamics, as well as internal and international migration, are some of the most fruitful pursuits in any geographic analysis of East Asia. Many geographers declare that a country's population is its most fundamental geographic resource. The presentation of a country's population density on maps reveals variegated patterns that stimulate student inquiry as to the reasons and causes of the distributions.

Geography Standard 10: The Characteristics, Distribution, and Complexity of Earth's Cultural Mosaics

East Asia, comprised of China, Japan, North and South Korea, and Việt Nam, has many shared cultural elements, even as each country has a distinct culture and interesting subcultures within their national boundaries. This standard explores the complex, multifaceted elements of life and belief in each country: vernacular architecture, clothing, written and spoken language, food, and religion. In addition, the place of ethnic minorities in China reveals patterns that are quite distinct from those found in the relative homogeneity of Japan and Korea.

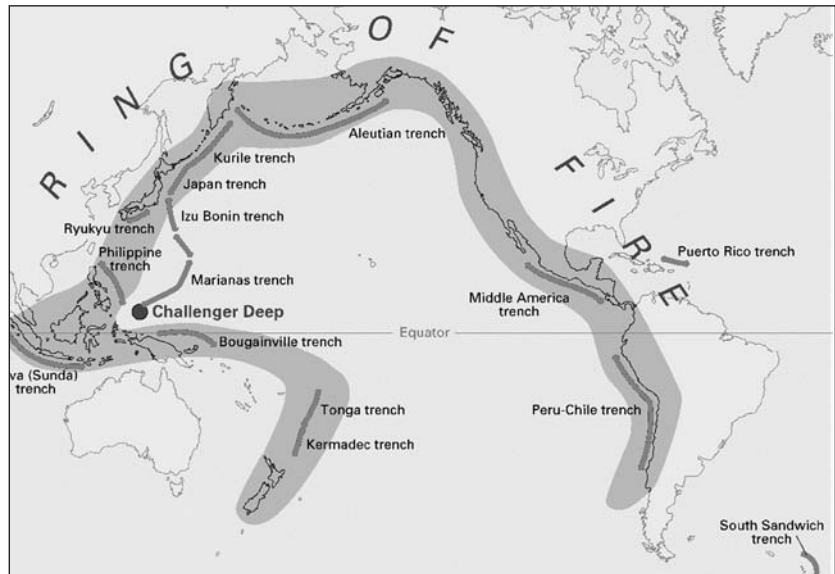


Figure 2: The Ring of Fire. Source: <http://pubs.usgs.gov/gip/dynamic/fire.html>.



Figure 3: Sakurajima Volcano, Japan. Source: http://landsat.usgs.gov/gallery_view.php?category=orangeflag&thesort=mainTitle.



Figure 4: Hearty grain fields in the incised valleys of northwestern China. (Photo: Ronald G. Knapp)

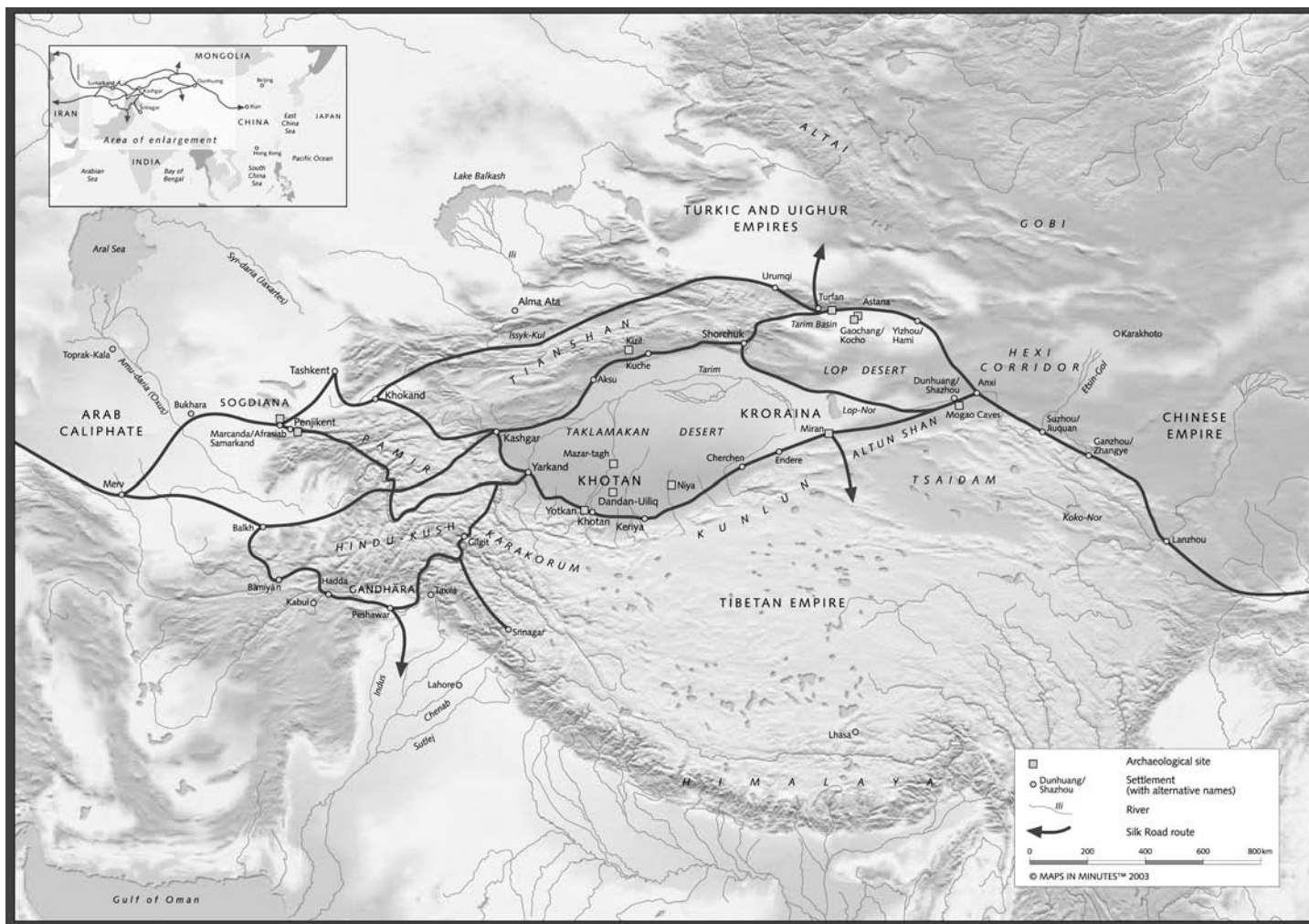


Figure 5: The Silk Roads. Source: http://www.chinainstitute.cieducationportal.org/cimain/wp-content/themes/chinainstitute/pdfs/education/fronsilktooi_1.pdf.

Geography Standard 11: The Patterns and Networks of Economic Interdependence on Earth's Surface

In smaller countries, such as Japan, Korea, and Việt Nam, necessary natural resources are sometimes absent and must be obtained elsewhere. This is true even in a large country such as China where inter-regional and even international trade has a long history. The importance of Silk Roads commerce two millennia ago, and the silver trade involving China, Japan, the Philippines, Latin America, and Europe between 1500 and 1800, underscores that globalization is not a recent phenomenon. The contemporary spatial dimensions of trade in raw materials and finished goods reveal not only the nature of comparative economic advantage and transportation innovations, but also imbalances in trading patterns. Modern-day Asia provides major workshops for both low- and high-end commodities consumed worldwide. Thus, geographic analysis can hasten understanding of the nature and patterns of global economic interdependence.

Geography Standard 12: The Processes, Patterns, and Functions of Human Settlement

Asia is often considered a continent of agriculturally based villages. In fact, urban centers (cities and towns) have historically been significant. While it is true that most of East Asia's populations live in rural settlements, it has always boasted cities of impressive size, complexity, and cosmopolitan character. Today, cities like Seoul, Tokyo, Shanghai, and Beijing have become global cities centering on commerce, finance, education, art, fashion, and entertainment. In what was once the countryside, significant numbers of villages and towns have been transformed, and former peasants are now engaged in manufactur-



Figure 6: Some of China's most distinctive rural residences are the earthen dwellings called *tulou* in southeastern China. (Photo: Ronald G. Knapp)

ing and commerce—at least part-time—while linked to the larger world by the Internet and shared popular culture. Yet, much remains as it has for centuries. Old agricultural practices, long-established crafts, and traditional religious systems function side by side with twentieth and twenty-first century forms, providing evidence of how villages, towns, and cities change.

Geography Standard 13: How the Forces of Cooperation and Conflict among People Influence the Division and Control of Earth's Surface

Each East Asian country battled with not only physical destruction but also enormous population loss during the twentieth century. While the battles

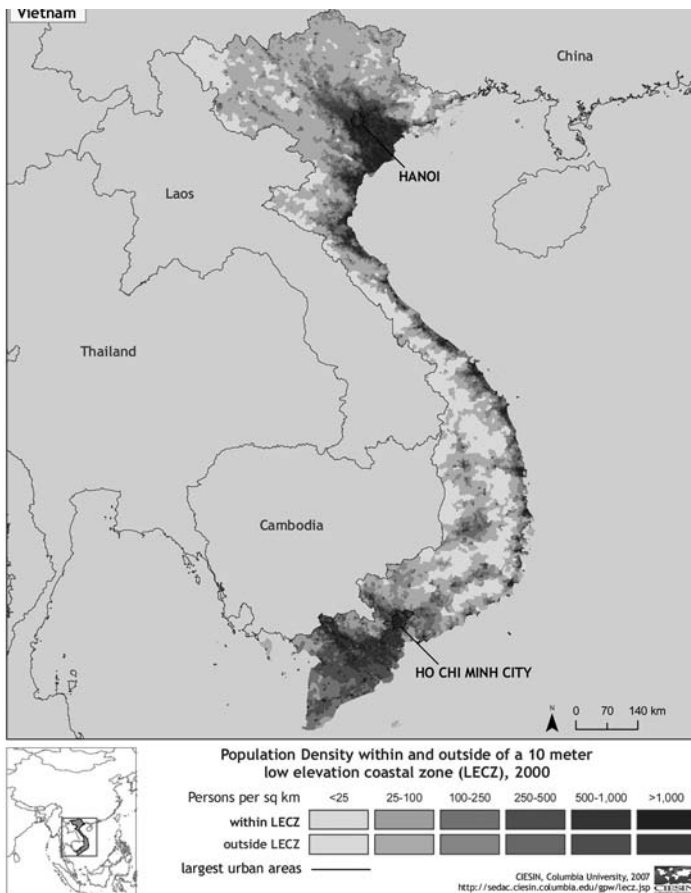
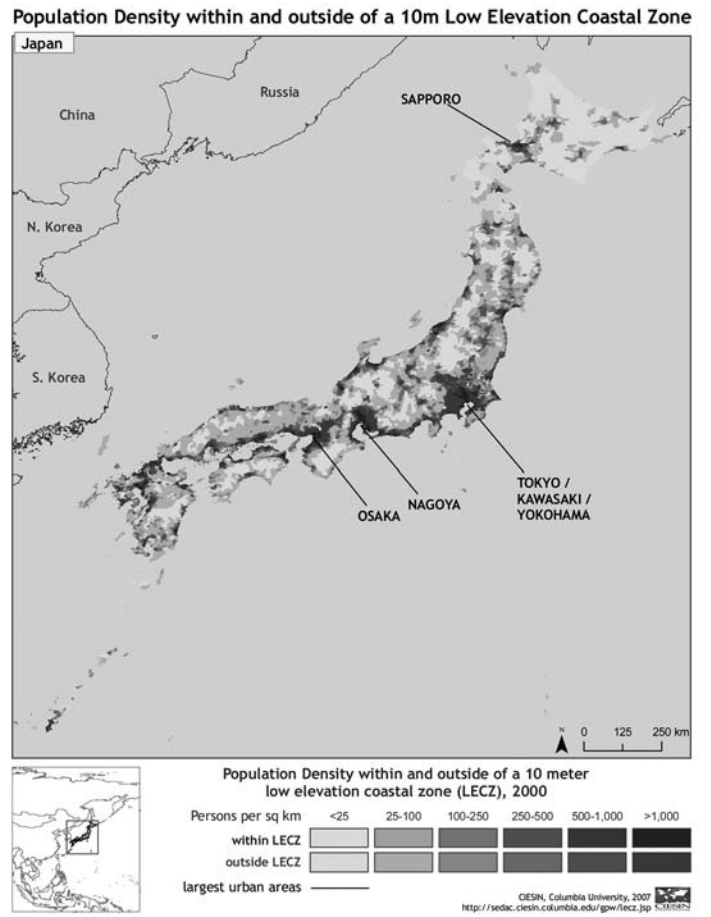
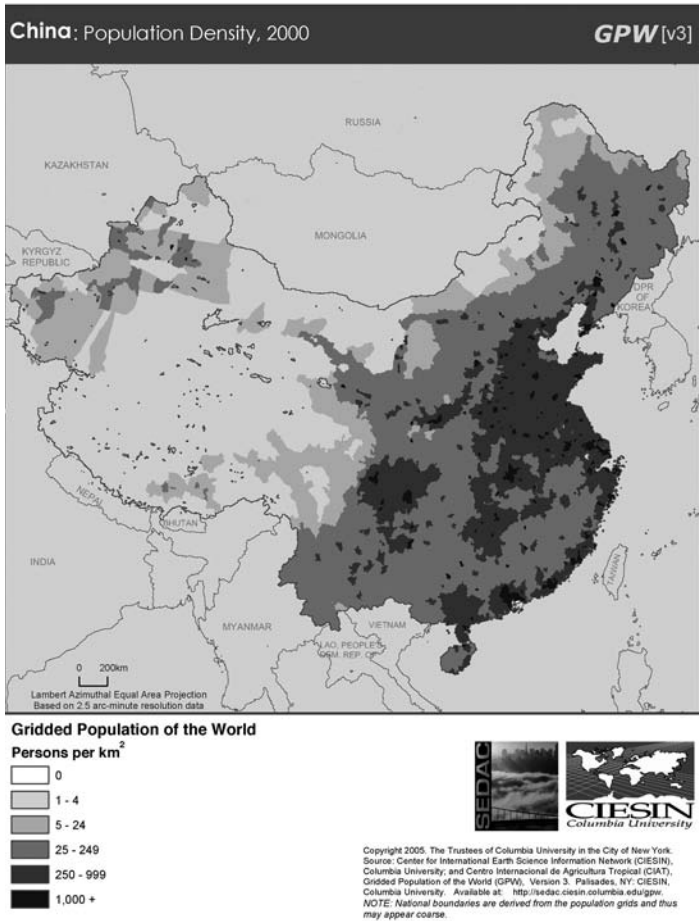


Figure 7: Pdf format population density maps of China, Japan, and Việt Nam from the Columbia University SEDAC (Socioeconomic Data and Applications Center) website. See links to the maps below.

China

http://sedac.ciesin.columbia.edu/wdc/downloads/maps/population/GPWv3_Population_Density_Grids/Population_Density_2000_China.pdf.

Japan

http://sedac.ciesin.columbia.edu/wdc/downloads/maps/population/Low_Elevation_Coastal_Zone/Japan_10m_LECZ_and_population_density.pdf.

Việt Nam

http://sedac.ciesin.columbia.edu/wdc/downloads/maps/population/Low_Elevation_Coastal_Zone/Vietnam_10m_LECZ_and_population_density.pdf.



Figure 8: Night view of Shanghai during the 2010 Expo.

Source: http://en.wikipedia.org/wiki/File:Skyline_of_Shanghai_Taken_from_the_Bund_during_Expo_visit.jpg.



Figure 9: NASA Landsat image of Shanghai and the Yangtze River.
Source: http://en.wikipedia.org/wiki/File:Shanghai_Landsat-7_2005-08-15.jpg.

fought in China, Japan, and Việt Nam are, for the most part, relegated to memory, the Korean War, fought more than a half-century ago, remains a potential point for conflict. Boundary disputes and tensions over disputed territory remain as more than mere irritants in the politics of East Asian countries. Both young and old carry with them memories and feelings associated with Hiroshima and Nagasaki; Saigon; the 38th Parallel; the DMZ; American, French, and Japanese Occupation; the Rape of Nanjing; Tiananmen Square; and Huế, among many other place-based resonances.

Essential Element E: Environment and Society

Geography Standard 14: How Human Actions Modify the Physical Environment

For much of history, the modification of Earth's environment through human action, while ongoing, was relatively slow. Over the past half-century, though, the pace has quickened at alarming levels. The changes resulting from looming levels of air and water pollution; depletion of fertile land in order to build factories, highways, railways, and housing; building dams along rivers; spread of harmful acid rain due to factory emissions; and deforestation, among many other conditions, are well known. In East Asia, these changes have brought prosperity to some and environmental crises to others. Geography's approach to understanding resource depletion, landscape degradation, and the dynamics of air and water pollution helps students understand how local and global are interconnected.

Geography Standard 15: How Physical Systems Affect Human Systems

Humans have a great capacity to adapt to the impacts of natural hazards and changes in their physical environments. No year goes by without dramatic news of events—typhoons, earthquakes, floods, droughts, and forest fires—that confront people living in East Asian countries. With large populations along coasts and lowlands or in high-rise buildings, the threats to life and property are constant. Relocation, loss of a means to make a living, environmental degradation,

even starvation, frequently accompany short-term natural events and lead to long-term consequences and adaptations. Geographers in Asian countries have a long history of studying the causes and occurrences of natural hazards and the vulnerability of all types of environments. The Internet provides easy access to visual materials relating to Asia that aid students in understanding the commonalities of environmental threats. The devastating Tōhoku earthquake and tsunami on March 11, 2011 in Japan, coupled with the damage to nuclear power plants and other infrastructure, clearly reveal the interdependence of physical and human processes.

Geography Standard 16: The Changes that Occur in the Meaning, Use, Distribution, and Importance of Resources

In the seventy years since Economist Erich W. Zimmermann stated, "Resources are not; they become," other scholars and the public have come to understand that natural conditions and cultural appraisals must be part of any understanding of what constitutes a resource. Air, water, and land are basic resources needed by all living organisms. As humans invent, they appraise the



Figure 10: The Jiangnan Canal, a section of China's Grand Canal.
Source: <http://en.wikipedia.org/wiki/File:Gcjiangnan1.JPG>.

value of natural materials needed in the process, developing the knowledge and technical ability to transform something that is raw into something that is useful. At one level, all resources are renewable—water, wind, and the sun—or non-renewable—coal, petroleum, and natural gas. Today, as resource depletion has become a global concern, East Asian countries are taking the lead in innovative approaches to reduce dependence on non-renewable resources by harnessing wind and solar power in China, as well as advancing hybrid- and electric-powered vehicles in Japan and Korea. Whether students are in Asia or in the West, it is imperative that they understand different types of resources and their global distribution patterns, as well as the competition among nations for access, and the economic, political, and technical challenges involved in seeking alternatives.



Figure 11: Wind farm, Xinjiang, China.
Source: http://en.wikipedia.org/wiki/File:Wind_power_plants_in_Xinjiang,_China.jpg.

Essential Element F: The Uses of Geography

Geography Standard 17: How to Apply Geography to Interpret the Past

As ancient civilizations, China, Japan, Korea, and Việt Nam each has its own geography of the past, just as each has a distinct historical narrative. Many scholars study what these countries were like, as well as how their landscapes have changed over time. The building of the Grand Canal in China during the early seventh century, the laborious creation of irrigation systems to grow rice, and migrations across great distances, for example, help us understand motivations and actions of generations living in these East Asian countries. Without bringing these geographical factors into view, history is one-dimensional, just as geography is one-dimensional when we ignore the temporal dimension.

Geography Standard 18: How to Apply Geography to Interpret the Present and Plan for the Future

“Geography is for life and not simply an exercise for its own sake,” declared an NGS document in 1994. As students strengthen their knowledge of the world in terms of spatial patterns and contexts, they will better see the

continuities of personal, local, regional, and global scales of inquiry, as well as the nature of ecosystems and the potential impacts of human actions on the physical environment. A geographically informed person is one who understands the implications of his or her own decisions, as well as those of individuals and groups elsewhere in the world. Maps and geospatial technologies are important tools in advancing geographic literacy. Given the magnitude of East Asia’s population, the extent of its territory, as well as the pace of its economic, social, and political development, it is imperative that we all acquire and master geographic knowledge, skills, and perspectives—geographic literacy. ■

RESOURCES

Asia for Educators, Columbia University at <http://afe.easia.columbia.edu/>.

Five Themes of Geography at <http://geography.about.com/od/teachgeography/a/5themes.htm>.

Geography Alliance Network at http://www.ngsednet.org/community/index.cfm?community_id=94.

Geography Education Standards Project. *Geography for Life: National Geography Standards 1994* (Washington: National Geographic Research & Exploration, 1994).

McColl, Robert. “Understanding the Geography of China: An Assemblage of Pieces,” at <http://www.asian-studies.org/EAA/mccoll.htm>.

My Wonderful World at <http://www.mywonderfulworld.org/gaw.html>.

National Geographic EdNet at <http://www.ngsednet.org/index.cfm>.

National Geographic Education at <http://education.nationalgeographic.com/education/>.

National Geographic Society: Asia: Continent of Contrasts at <http://www.mywonderful-world.org/continents/asia/>.

RONALD G. KNAPP is SUNY Distinguished Professor Emeritus at the State University of New York, New Paltz, where he taught from 1968 through 2001. Currently, he is an Adjunct Professor at Teachers College Columbia University where he teaches an online course, *East Asia: Geographic Perspectives* and was faculty consultant for the Asia for Educators East Asia in Geographic Perspective website at <http://afe.easia.columbia.edu/>. He is the author or editor of seventeen books on China’s cultural and historical geography, including *Chinese Houses of Southeast Asia: The Eclectic Architecture of Sojourners and Settlers* (Tuttle, 2010), and *Things Chinese: Antiques—Crafts—Collectibles* (Tuttle, 2011).

中
国
图
片
库

GREATER CHINA
COVERAGE

NEWS AND PRESS

EDITORIAL AND
CORPORATE
ASSIGNMENT

IMAGINECHINA
CHINESE PHOTO AGENCY
WWW.IMAGINECHINA.COM

