



## Core Knowledge Geography Syllabus

### Course Description:

**Catalog description:** A three-credit topical introductory overview of geographic concepts, themes, and elements designed to help pre-service Education students better understand and analyze the world from a geographic perspective. It provides a background to Earth’s physical and human elements and systems. It also emphasizes the unique qualities of world regions, and the spatial interaction of people, elements, and regions, as well as major regional and global problems and prospects.

### Course Prerequisites:

None

### Course Learning Goals and Objectives:

The primary objective of the course is to provide pre-service K-8 teachers with a substantive knowledge of geography as a science, including its leading concepts, theories, perspectives, themes, tools, and vocabulary.

The science of geography provides a *methodological framework* for exploring the varied *physical and human features* of *Earth’s surface* in a *spatial context*. Having a well-developed geographic perspective helps individuals better understand and explain the distribution of features and conditions in the world about us—where things are, what they are like, why they are located in particular places, and why they are important to us—in essence, the fundamental geographic question is “*what is where, why there, and why care?*” in regard to the varied natural and human features and conditions of Earth’s surface.

Geography is a unique field of study. For example, it is an *integrative, or holistic, science*, the content of which spans both the physical and human elements of Earth’s surface. In so doing, geography forms a bridge that closely links humans and the life-sustaining natural environment. Geography differs from all other sciences in yet another way. The science is identified and defined not by its content, but by its *methodology*. Geography’s *spatial* methodology asks

“*where?*” [In contrast, the primary historical, or temporal, question is “*when?*”] By organizing and analyzing information about Earth’s natural and cultural features in a spatial context, geographers attempt to further our knowledge of Earth’s locations and places, features and conditions, movements, interrelations and interactions, as well as regional distributions and patterns.

Geography is a *process-oriented science*. Many concepts, tools, and skills are applied when attempting to understand why particular features occur in certain places and why such distributions are important. The *regional concept* is fundamental to geographic analysis. Regions—such as the Great Plains, Corn Belt, Amazon Basin, Sahara Desert, or Egypt—are the geographer’s primary means of spatially organizing information. *Maps* are the geographer’s chief tool; an ability to read and interpret maps is essential to geographic study. Students who successfully complete this course should:

- (a) **Possess basic skills for map reading and interpretation.** Students should become familiar with and proficient in the use of: map symbols, scale, direction, and distance; various types of maps and their distinctive properties; maps to present geographic information and to interpret and solve geographic problems; and atlases as sources of geographic data.
- (b) **Possess a somewhat detailed “mental map” of the world.** Students should know the locations of Earth’s most important physical and human features and conditions, the chief agents responsible for their formation and distribution, and their importance
- (c) **Understand the basic relationships that exist between humans and the natural environments they occupy.** Students should recognize the different fundamental ways by which various societies culturally adapt to, use, and modify the natural environment(s) they occupy. They also should understand and appreciate the concept of natural resources and the need for an enhanced global environmental ethic.
- (d) **Understand and apply the concept of region.** Students should be able to employ the regional concept to identify, organize, and analyze similar (and dissimilar) areas on a local, state, national, and global scale.
- (e) **Understand the importance of movement.** Students should recognize the significance of movement as it pertains to natural elements, ideas, people, and materials. They should be aware of the role of accessibility and isolation as primary factors influencing disparate levels of cultural attainment and economic development.
- (f) **Recognize the importance of culture as the primary influence on how humans, as societies, live.** Students should be aware of the basic differences found worldwide in ideological, technological, sociological, and perceptual components of culture, and the importance of these

differences in understanding and explaining the great diversity in ways of living practiced within the human mosaic of cultures.

- (g) **Recognize and appreciate the increasing importance of global interdependence.** Students should realize that all human societies and geographical locations are becoming increasingly intertwined as transportation and communication technology have contributed to an increasingly interconnected global community.
- (h) **Appreciate the beauty of Earth's diversity.** Students should recognize and appreciate the beauty of Earth's richly diverse human and natural conditions. Prejudice is based on ignorance; tolerance and appreciation are strengthened through understanding. Different conditions and ways of living must be judged on their own merits and within their own cultural contexts.
- (i) **Realize the importance and utility of a geographic perspective.** Students should recognize the importance of geographic knowledge and skills as they prepare their own students to assume leadership roles in a complex and often troubled global community. They also should know that acquiring a geographic perspective is "learning for living" and that geographic knowledge has numerous daily and vocational applications.
- (j) **Be well prepared to teach the Geography component of the Core Knowledge Curriculum, and/or various state curricula that include a substantial geography component.**

#### **Description of Instructional Methods:**

The course will be conducted primarily in a lecture and discussion format. Additionally, students can expect [**NOTE:** Instructors should tailor specific details concerning instruction and assignments to their own teaching environment and situation, e.g., group work, computer based research, library assignments, written assignments, class oral reports, and so forth]. Lectures, readings, media, and other instructional strategies are designed to provide a shared foundation, or core, of information.

It has been said that it is difficult, if not impossible, to teach a person anything. One can only assist another individual as she/he pursues her/his own quest for knowledge. In many respects, the ability to teach is the ability to inspire, that is, to facilitate self-motivated and individually directed learning. The instructor's role is to provide students with the many tools, skills, information building-blocks, concepts, and physical/cultural/regional geographic information and perspectives that are essential to lifelong learning about our complex and ever changing world.

It is the responsibility of each student to ensure that she/he takes from the class the knowledge needed to successfully inspire his/her own students.

### **Course Requirements:**

**Textbook:** Arthur Getis, Judith Getis, Jerome D. Fellmann, *Introduction to Geography, 8/e.* Dubuque, IA: McGraw Hill Publishers (2002).

**NOTE:** The Getis, Getis, Fellman book is the only known text currently in print that covers physical, human, and regional geography in a topical manner; the syllabus, therefore, is developed around this book. In rare instances, an instructor may have adequate experience and resources, e.g., detailed topical outlines, selected readings, and a variety of hand-out materials, to conduct a course without using a textbook, or by using a textbook in, say, physical geography or human geography and supplementing the book with his or her own materials. However, use of the textbook is strongly recommended. Students should be encouraged to retain the text for use as a reference in their own classrooms.

**Supplementary materials:** *Goode's World Atlas* (20<sup>th</sup> Edition) . Chicago: Rand McNally Co., 2000 (or current)

[**NOTE:** It is *imperative* that students become comfortable with reading and using maps and other information contained in a detailed atlas. *Goode's* is recommended, but the selection is left to the discretion of the instructor. Various assignments should involve detailed use of the atlas, and it should be referred to repeatedly during lectures]

**Class attendance policy:** [**NOTE:** to be established at the discretion of individual institution, department, and instructor].

**Cheating and plagiarism policy:** [**NOTE:** sample only] Any student caught in the act of exchanging information during an examination, utilizing cheat sheets, or in any other way cheating on a test will receive no credit for that particular exam and will become liable for forfeiture of credit for the entire course. The same penalty applies to all other assigned work. For further details, please refer to appropriate published University policies.

**Make-up policy:** [**NOTE:** Policy at the discretion of individual institution, academic department, and instructor]. Should students miss a scheduled examination for an *officially excused reason* (proof of which must be submitted in writing), a make-up exam will be allowed. Make-up tests generally will be somewhat more comprehensive than regular exams. They will be administered only once, at a time convenient to all eligible students. It will not be possible to make-up a make-up exam

## Evaluation Procedures:

**Assessments:** [NOTE: To be determined by instructor. For this student group, it is recommended that assessment emphasize weekly activities/exercises that will have direct transfer into the classroom setting, yet maintain the integrity of a geographic *content* focus. This is not a methods course, but its content and assessment should accommodate the specific interests and needs of the K-8 pre-service teacher. This can be done in many ways, for example:

- (a) Tailor questions to teaching situations;
- (b) Design written assignments in such a way that they will have classroom teaching utility;
- (c) Have students compile a notebook with containing at least the framework of teaching lessons based on each chapter (with particular emphasis on subjects taught in grades K-8);
- (d) Examinations should emphasize applications of knowledge, rather than rote recall.

**Performance standards/Grading policy:** [Grading is left to the discretion of each institution, department, and instructor]

## Use of this Syllabus:

This syllabus was created by Charles F. Gritzner, Distinguished Professor of Geography at South Dakota State University, as part of *What Elementary Teachers Need to Know*, a teacher education initiative developed by the Core Knowledge Foundation. Although the syllabus is copyrighted by the foundation, and may not be marketed by third parties, anyone who wishes to use, reproduce, or adapt it for educational purposes is welcome to do so. However, we do ask individuals using this syllabus to notify us so we can assess the distribution and spread of the syllabi and serve as a repository of information about how they may be improved and more effectively used. Please contact Matthew Davis, Core Knowledge Foundation, 801 East High Street, Charlottesville, VA 22902. Phone: 434-977-7550, x. 224. E-mail: [mdavis@coreknowledge.org](mailto:mdavis@coreknowledge.org)

# INTRODUCTION TO GEOGRAPHY

## *SCHEDULE OF TOPICS AND READING ASSIGNMENTS*

### INTRODUCTION

[Each topic represents one class period]

#### *First week*

#### **Topic 1: Orientation and Introduction**

- (a) Review of syllabus
- (b) Nature of course [Topical format designed to provide students with the knowledge needed to teach both systematic and regional approaches to geography, both of which appear throughout the Core Knowledge K-8 curriculum]
- (c) Goals and objectives
- (d) Expectations

#### **Topic 2: The Nature and History and Utility of Geography** (Chapt. 1, pp. 1-6)

- (a) The nature of geography [See attached essay and diagrams]: a *methodology*, or unique way of organizing and analyzing information, *spatially* [geographic questions begin with “where?” just as history’s questions begin with “when?”]; A *holistic* science that encompasses all features of Earth’s surface, both physical (natural) and human (cultural). Because all human activities (sciences) occur *somewhere*, geography serves as an ideal foundation upon which other social sciences can build.

- (b) Applications of geographic knowledge: because it is a methodology, a unique way of viewing the world spatially, geography has an interface, or overlap, with all other fields of study (why do geography and history constitute the ideal core of a social studies curriculum?); the importance of geographic understanding in the contemporary world.
- (c) Geography as an ancient science: Greek origins; Muslim contributions; dawn of the modern era; evolution of sub-fields (regional geography, systematic/topical geography focusing upon physical and human aspects of Earth's surface).
- (d) Applications of geography (teaching, government, business, individual).

Second week

**Topic 3: Basic Geographic Concepts** (Chapt. 1, pp. 6-15)

[NOTE: Geography's "five themes," *location, place, interaction, movement, and region*, appear on p. 15. For additional information, see *Guidelines for Geographic Education: Elementary and Secondary Schools*; the 1984 publication is available from the National Council for Geographic Education; See Topic 4, item (a)]:

- (a) *Location*: absolute (site) and relative (situation)
- (b) Direction (absolute and relative)
- (c) Distance (absolute and relative)
- (d) Size and scale
- (e) Physical and cultural attributes of *place* (natural and cultural landscapes); landscape change as a geographic constant
- (f) *Interrelations* between places: spatial interaction (remote and accessible); spatial diffusion
- (g) Concept of *region*: regions as the geographer's "convenience packages"; regions are abstract (exist only in the human mind), arbitrarily determined (different geographers select different criteria); and are based on one or more homogeneous elements; types of regions (formal, functional)

**Topic 4: Geography's Themes, Standards, and Traditions** (Chapt. 1, pp. 15-19)

- (a) Review and illustrate the "five fundamental themes of geography" and their importance
- (b) Overview of the National Geography Standards and their application (discuss and illustrate)
- (c) Traditions in geography (earth science, culture-environment, spatial/location, area analysis)
- (d) Resources for geography teaching (p. 19, pp. xi-xii, National Council for Geographic Education, numerous web sites, state geographic alliances, others)

Third week

**Topic 5: Maps—A geographer's best friend** (Chapt. 2, pp. 22-33; *Goode's*, pp. vi-xi)

- (a) The importance of maps in teaching geography and in functioning as an educated member of society; the geographer's primary "tool" of data recording, analysis, and communication
- (b) Earth's grid system: parallels and latitude; meridians and longitude (Prime Meridian and International Date Line); directions
- (c) Land survey systems. Several systems are used in various regions of the United States, and students should be made aware of their importance in land division and evolution of the cultural landscape (e.g., roads, fields, town layouts, and so forth)
- (d) Map projections: area, shape, distance, direction (emphasis should be placed on selecting the most appropriate maps for specific purposes, and being able to recognize major distortions in certain projections, e.g., size in the case of the Mercator projection)
- (e) Map scale

**Topic 6: Maps (continued)** (Chapt. 2, pp. 33-55)

[NOTE: Provide a brief general overview of the remainder of the chapter, before emphasizing topic (d)]:

- (a) Different kinds of maps: topographic maps showing terrain; contour lines
- (b) Map symbols and patterns: point symbols, area symbols, line symbols
- (c) Remote sensing: aerial photography; geographic information systems (GIS)
- (d) Devote remainder of the class period to an introduction of *Goode's World Atlas* and its contents.

**PART 1. THE EARTH SCIENCE TRADITION**

*Fourth week*

**Topic 7: Earth's landforms (Geology & tectonic forces)** (Chapt. 3, pp. 59-77; *Goode's*, pp. 4-5, 8-9, 10-11, 12-13, 67)

- (a) Brief overview of the importance of land forming processes and landform features: begin with example(s) of important landform features in your state or region and how they impacted such things as transportation, settlement, resource exploitation, tourism, history, or other significant aspects of geography; examples from elsewhere, e.g., mountains as barriers and plains/river valleys as corridors
- (b) A dynamic Earth: Geologic time; Earth history; continental drift; mechanics of plate tectonics (special emphasis on Fig. 3.5 and 3.6, which explain the global distribution of earthquakes)
- (c) Earthquakes (and tsunamis), volcanic eruptions, and other land-related hazards



- (d) Earth materials (brief explanation of igneous, sedimentary, and metamorphic rocks and their origin and chief differences)
- (e) Tectonic forces (agents working from within the earth): diastrophism (warping, folding, faulting) and Volcanism

**Topic 8: Earth's Landforms (Gradational processes)** (Chapt. 3, pp. 77-97)

- (a) The process of gradation (agents working on Earth's surface): Weathering (mechanical and chemical)
- (b) Mass wasting (down-slope movement resulting primarily from gravity)
- (c) Agents of erosion and deposition: running water, glaciers, waves and currents, wind
- (d) Major landform regions  
(Key to atlas exercise. Students should know the location of Earth's primary landform regions. In most states, it can not be assumed that places and their locations already have been taught and learned)

*Fifth week*

**Topic 9: Weather** (Chapt. 4, pp. 99-119; *Goode's*, pp. xii, 16-21)

- (a) Weather vs. climate and the importance of both (place emphasis on the role of weather in our daily lives, and the importance of climate in the creation of ecosystems and their relation to human land use potentials and patterns)
- (b) Controls of air temperature: Latitude, land-water influences, elevation (lapse rate), ocean currents
- (c) Controls of air pressure and winds: pressure gradients; convection; local winds (e.g., land and sea breezes, or mountain and valley breezes; emphasize wind patterns that are significant to your area); global pressure and wind belts and their importance (e.g., they help to explain many precipitation and temperature patterns worldwide)
- (d) Controls of precipitation: moisture in the atmosphere; types of precipitation (convective, orographic, cyclonic or frontal), and where/when they occur
- (e) Storms (midlatitude cyclones, hurricanes/typhoons, blizzards, tornadoes)

**Topic 10: Climate** (Chapt. 4, pp. 119-119-126; *Goode's*, pp. 24-29)

- (a) The nature and importance of climate, particularly in reference to ecosystems, habitat, and human land use practices (cultural adaptation, land use, and environmental change)
- (b) Soils and climate (emphasis on soil forming factors and their contribution to fertility or the lack thereof, e.g., leaching of nutrients vs. non-leached; accumulation of organic matter)
- (c) Natural vegetation: succession; natural regions; human impact upon the biosphere
- (d) Case study--Tropical Climates (A): Tropical Rain Forest; Tropical Savanna

[NOTE: Tropical Rain Forest handout, attached, can be used as a general model for developing other climatic and ecosystem regions]

Sixth week

**Topic 11: Climate (continued)** (Chapt. 4, pp. 132-145; Goode's, pp. 24-29; have students correlate maps on pp. 24-29 with maps on pp. 30-31 and 38-39)

- (a) Dryland climates: Tropical Deserts; Midlatitude Deserts and Semideserts
- (b) Humid midlatitude climates: Mediterranean climate; Humid Subtropical climate; Marine West Coast climate; Humid Continental climate
- (c) Subarctic and Arctic climates
- (d) Climatic change

**Topic 12: Human Impact on the Environment** (Chapt. 5, pp. 148-168)

- (a) Concepts of *ecology* and *ecosystem*
- (b) Human impact on water: hydrologic cycle; water distribution and availability; modification of streams; water quality and pollution; controlling water pollution
- (c) Human impact on air and climate: air pollutants; factors affecting air pollution; acid Rain; smog; ozone depletion; greenhouse effect and global warming; controlling air pollution
- (d) Survey of Earth's major water features (oceans, seas/gulfs/bays, rivers, lakes)  
(Key to atlas exercise)

Seventh week

**Topic 13: Human Impact on the Environment (continued)** (Chapt. 5, pp. 168-189)

- (a) Human impact on land and soils: excavation, dumping, surface depressions; soils (if possible, illustrate with local examples)
- (b) Human impact on plants and animals: habitat disruption, hunting and commercial exploitation; exotic species; poisoning and contamination
- (c) Solid waste disposal: municipal waste, hazardous waste

**PART 2. THE CULTURE-ENVIRONMENT TRADITION**

**Topic 14: Population Geography** (Chapt. 6, pp. 194-229; Goode's, pp. 30-31, 32-33; 250-251)

[NOTE: In the context of Chapter 6, it is extremely important to focus attention on those aspects of population that have particular relevance in the context of grades K-8 and the Core Knowledge curriculum. Particular attention should be given to population dynamics, growth, and distribution. Use of the current *Population Reference Bureau (Annual) Data Sheet* is highly recommended; see Appendix, pp. 509-515 for 2000 data]

- (a) The importance of population and population change: placing population in context
- (b) Population growth
- (c) Population terms and concepts: birth rates; death rates; population pyramids; natural increase; rates of growth
- (d) The demographic transition: place emphasis on Stage 1 with high birth rates, high death rates, and a low standard of living, vs. Stage 4 with low birth rates, low death rates and a high standard of living; include concepts of “population explosion” (stages 2 and 3) and zero population growth (ZPG)
- (e) Migration: its causes and impacts (NOTE: Migration is discussed in considerable detail in Chapter 8; do not duplicate)
- (f) World population distribution (with brief explanation of why some areas are dense, Whereas others support but a very sparse population)
- (g) Population density
- (h) The concept of “overpopulation” (Make clear that it involves many complex factors, numbers alone not necessarily being the most significant)
- (i) Population data and projections/prospects

### Eighth week

#### **Topic 15. Introduction to Cultural Geography** (Chapt. 7, pp. 232-249)

- (a) The importance of culture as a geographical element (for purposes of this course, Culture can be defined as a “way of life,” the ways in which people think and act, and the things they make and possess
- (a) The nature and components of culture: culture traits (material and non-material) and trait complexes; people sharing a common set of culture traits share a common way of life, hence, a common culture
- (b) Theories of human-environment interaction: environmental determinism, possibilism, cultural determinism (environmental perception)
- (c) Subsystems of culture: technological, sociological, ideological
- (d) How culture changes: innovation, diffusion, acculturation

#### **Topic 16. Cultural Diversity** (Chapt. 7, pp. 249-279; *Goode's*, pp. 35)

- (a) Language: nature, spread and change, differences, cultural importance
- (b) Religion: nature, classification, and distribution
- (c) Ethnicity: nature and importance
- (d) Gender and other aspects of diversity and culture
- (e) Culture realms

*Ninth week*

**Topic 17. Geography of Spatial Behavior** (Chapt. 8, pp. 283-311)

[NOTE: How do people perceive their own and other environments? How do these perceptions influence our behavior? How does space influence our actions? How and why do ideas move (or not move), and why? Whereas much of this chapter's material may not be appropriate (as presented) for the K-8 level student, a great deal of it is essential for teachers. The underlying concepts can and should be integrated into many subjects appearing in the CK curriculum].

- (a) Environmental perception—how individuals see their “world”: mental maps; perceptions of various natural hazards
- (b) Individual space
- (c) Distance and spatial interaction
- (d) Spatial interaction and the accumulation of information
- (e) Innovation and diffusion: the spread of ideas
- (f) Migration: push factors and pull factors; barriers to migration; patterns of migration; spatial search

**Topic 18. Political Geography** (Chapt. 9, pp. 313-350)

- (a) The organization of space and power
- (b) National political systems: concepts of state, nation, and nation-state; Evolution of the modern state; geographic characteristics of states (size, shape, location, cores and capitals); boundaries; geopolitical assessments; centripetal and centrifugal forces
- (c) International political systems
- (d) Local and regional political organization

**PART 3. THE LOCATIONAL TRADITION**

*Tenth week*

**Topic 19. Economic Geography** (Chapt. 10, pp. 355-377; numerous economic maps and tables in *Goode's*)

- (a) Classification of economic activity and systems: categories (primary, secondary, tertiary, quaternary); types of economic systems (subsistence, commercial)
- (b) Primary economic activities: agriculture, fishing, forestry, mining
- (c) Trade in primary products

**Topic 20. Economic Geography (continued)** (Chapt. 10, pp. 377-396; numerous economic maps and tables in *Goode's*)

- (a) Secondary economic activities: manufacturing (locating, location, location!);

- transnational corporations; world patterns of manufacturing
- (b) Tertiary and other industries
  - (c) World trade patterns
  - (d) The future of industry and commerce

*Eleventh week*

**Topic 21. Geography of Natural Resources** (Chapt. 11, pp. 398-422; *Goode's* map series, pp. 50-61 particularly useful; numerous others by selected topic and region)

- (a) Resource terminology: resources; renewable and nonrenewable; resource reserves
- (b) Nonrenewable energy resources: energy; crude oil; coal; natural gas; oil shale; tar sands; nuclear
- (c) Renewable energy resources: biomass; hydroelectric; solar; geothermal; wind
- (d) Nonfuel mineral resources: distribution

**Topic 22. Natural Resources (continued)** (Chapt. 11, pp. 422-449; *Goode's* maps, pp. 38-49 and by region)

- (a) Food Resources: production; expansion of cultivated areas; malnutrition and gender; increasing yields; fishing
- (b) Land resources: coastal wetlands; forest resources
- (c) Resource management

*Twelfth week*

**Topic 23. Urban Geography** (Chapt. 12, pp. 442-483)

[NOTE: Much of the content appearing in Chapter 12 does not pertain to the K-8 Core Knowledge curriculum. Emphasis is placed on those aspects of the urban process and environment that are relevant to the needs of K-8 pre-service educators]

- (a) Introduction to urbanization
- (b) Functions of urban areas: why people live in cities and urban functions; definitions
- (c) Locations of urban settlements (factors of settlement location)
- (d) Economic base of cities
- (e) Metropolitan region (pp. 465-467)
- (f) Case study settlement (rural, town, city) characteristic of your area

**PART 4. THE AREA ANALYSIS TRADITION**

**Topic 24. The Regional Concept** (Chapt. 13, pp. 489-508)

[NOTE: The Core Knowledge curriculum includes a number of regional case studies and it is essential that students know both the nature of regions and the fundamental elements of area analysis. The concept of region was touched upon in Topics 3 and 4. Students should be made aware of the fact that since Chapter 1, the subjects, as presented in chapter sequence, are typical of an outline for regional presentation. An essay on regional geography is attached].

- (a) The nature of regions
- (b) Regions in the Earth Science tradition
- (c) Regions in the Culture-Environment tradition
- (d) Regions in the Locational Tradition

### Thirteenth week

#### **Topics 25-26. Regional Case Study**

Instructor will select a region of his/her choice and present it as a model case study. Consideration should be given to all topics covered in the course (assuming they are relevant to the region presented). A sample outline (Latin America) and sample country case study (Japan) are attached.

## APPENDICES

(p. 16; Handout chart) “Defining Geography”  
Topic 2

(pp. 17-18; Essay) “What *IS* Geography?”  
Topic 2

(pp. 19-20; Essay) “Why Geography?”  
Topic 2

(pp. 21-22; Essay) “Geography’s ‘Five Themes’”  
Topic 4

(pp. 23-27; Glossary) “Glossary of Terms Used in Teaching with Maps and Globes”  
Topics 5-6

(pp. 28-31; Outline lesson) “Understanding Latitude & Longitude”  
Topics 5

(pp. 32-33; Outline lesson) “Why Bother with Landforms?”  
Topic 7-8

(p. 34; Handout outline) “Tectonic Forces”  
Topic 7-8

(p. 35; Handout outline) “Gradational Forces”  
Topic 7-8

(p. 36; Handout) “Mississippi River”  
Topic 12

(p. 37; Handout) “World Population Data: 2001”  
Topic 14 (can be updated yearly using PRB Data Sheet)

(p. 38; Handout) “Concept of *Overpopulation*”  
(Topic 14)

(p. 39; Handout) “Did You Know that. . .(Population Myths)?”  
Topic 14

(p. 40; Handout) “What, Then, Are the Problems?”  
Topic 14

(p. 41; Exercise) “Cultural Definition of Natural Resources”  
Topic 21

(p. 42-43; Outline) “Regional Studies: General Guidelines and Considerations”  
Topic 25-26

(p. 44; Handout: Illustration of Identifying Important Elements) “Monsoon Asia”  
Topic 25-26

(pp. 45-48; Outline) “Japan: Miracle of the Orient”  
Topic 25-26

(pp. 49-53; Outline) “A Geography of Latin America”  
Topic 25-26

(pp. 55-61) Assessment

## DEFINING GEOGRAPHY

*“WHAT is WHERE, why THERE, and WHY CARE?”*

<p><b>WHAT</b> is [Phenomenological]</p> <p><b>All features of Earth’s surface that occur in spatial distribution</b></p> <p>* <i>Physical features</i> (Nature)</p> <p>* <i>Human features</i> (Culture)</p>	is	<p><b>WHERE,</b> [Spatial]</p> <p><b>Location</b></p> <p>* <b>Site</b> (Specific)</p> <p>* <b>Situation</b> (Relative)</p> <p><b>Distribution</b></p> <p><b>Pattern</b></p> <p><b>Area</b></p> <p><b>Region</b></p> <p><b>Accessible</b></p> <p><b>Remote</b></p>	and	<p><b>WHY THERE,</b> [Analytical]</p> <p><b>Agents</b></p> <p><b>Processes</b></p> <p><b>Interrelationships</b></p>	<p><b>WHY CARE?</b> [Implicational]</p> <p><b>Importance</b></p> <p><b>Relevance</b></p> <p><b>Action/Reaction</b></p>
---	----	---	-----	---	--

*(DESCRIPTIVE)*

*(CONCEPTUAL)*

**PLACE**

**LOCATION**  
*REGION*

**INTERACTION**  
*MOVEMENT*



## WHAT IS GEOGRAPHY?

Defining geography is no easy task. Indeed, few fields of study seem to be more “fuzzy” in the minds of laymen and educators. Many people confuse geography with *geology*; after all, both sciences share a common interest in *geo* (Earth) and the distinction between *graphy* (Greek: to write about, or describe) and *logy* (Greek: to discourse, or speak about) seems rather insignificant! Others believe that geographers are people who travel to exotic places, take beautiful photographs, and publish accounts of their adventures in the *National Geographic Magazine*. Still others associate geography with the laborious and sterile memorization of states, capitals, the length of rivers and height of mountains, and leading products of the world’s places. Perhaps the most commonly held perception of geographers is our fascination with maps and what they can tell us about places. To the trained geographer, most of the foregoing seems somewhat strange! After all, as a recognized body of knowledge and as a *unique methodology* used in studying the varied physical and human features of Earth’s surface, geography is hardly the “new kid on the block.” In fact, geography is the most ancient of the existing sciences! Its origin is traced to ancient Greek *Cosmography* (The comprehensive study of Earth and the Cosmos), and the term *geography* (first used by the Greek scholar Eratosthenes in ca. 200 BC) has been around for more than 2,200 years!

Actually, there are many definitions of geography. Although geographers may not always agree on a single definition of their field of study, a considerable amount of agreement exists within our community concerning the fundamental nature of this unique discipline. Most simply stated, geographers study **what is where, why there, and why care?** in regard to the varied features—both physical and human—of Earth’s surface. Application of the *geographic (spatial) method*, helps one better understand the complex and seemingly bewildering distribution of Earth’s features, conditions, interrelationships, distributions, and patterns.

A key to understanding the nature of geography rests in the realization that the science is based not on *what* geographers study, but on *how* we organize and analyze information pertaining to any of Earth’s physical or cultural features. Geography is a *correlative, integrative, holistic* science. In an age of increasing scientific compartmentalization, geography provides a “*bridge*” of understanding that links otherwise fragmented information from the natural and social sciences, the arts and humanities, and history. It presents information in a *spatial* (location) organizational framework. The geographic approach is a *methodology*, a distinctly unique way of organizing and analyzing information—information pertaining literally to *anything* that can be identified, located, mapped, and analyzed in terms of its spatial location and distribution [History, too, is a methodology that can easily be contrasted: geographers ask “*where and why?*”, whereas historians ask “*when and why?*”].

One of the most fundamental assumptions of geographic study is that once a particular feature, or set of features, is spatially depicted (mapped), the resulting pattern(s) can be explained by identifying and analyzing various *processes* and *interrelationships* which, functioning through time and space, have contributed to their

occurrence. Obvious examples include the relationship that exists between a particular type of climate and its associated vegetation, animal life, water features, soil, erosional and depositional landforms, and land use potential; and in human geography the relationship between a culture and its associated economic activity, technology, belief and communication systems, social customs, diet, perceptions, and landscape imprint.

Geographers study Earth's features in a variety of ways when organizing, analyzing, and presenting information—be it on a local, regional, or global scale. The most commonly employed traditions are: **spatial analysis**, in which selected features are studied in the context of their location, spatial arrangement or pattern, and their relationship to other features; **earth-human interrelationships** (cultural ecology), which focus upon cultural perceptions of and adaptation to environmental conditions, including resource potentials and use, and environmental change; **cultural landscape** approach, in which human activities are studied in space and time for the purpose of better understanding the human imprint on Earth's surface; and the **regional concept**, which is used in identifying, describing, and explaining patterns of relative homogeneity on Earth's surface. Considerable overlap exists between and among the four traditions. In teaching, geographic information can be integrated using five concepts or themes: **location** (position on Earth's surface), **place** (physical and human features and conditions), **interaction** (the ways in which humans culturally adapt to, use, and change Earth's natural environments), **movement** (uneven flow of natural elements, people, materials, and ideas), and **region** (areas in which one or more conditions are similar).

Regardless of the particular traditions or themes employed in geographic study, an **historical** (temporal) dimension is essential. Only by understanding past events, processes, interrelationships, and patterns can one fully understand those agents that have contributed to the evolution of contemporary features, conditions, and distributions.

Might the foregoing information explain the prominence of geography in the curriculum of nearly all countries within the developed world, and in many others as well? Might it also explain, at least in part, why geography has languished in the American curriculum? Where, after all, can a “place” be found for a science claiming to be both physical and cultural, as well as both spatial and temporal, in a rigid curriculum employing a stultifying and unrealistic “pigeon hole” approach to the organization and compartmentalization of knowledge? Few educators fail to recognize the importance of history's temporal (when?) perspective; why is it that so few people seem able to grasp the comparable importance of geography's spatial perspective (where?) perspective? All things occurring in time, after all, also occur (red) someplace.

Finally, geography is a dynamic science. It has been called “Learning for living.” Few sciences can offer a more immediate or direct benefit in terms of daily living as a member of an increasingly diverse, complex, often conflicting, and certainly often confusing world. In addition to its intrinsic values, today geography offers a world of vocational opportunities in a broad variety of fields including government, business, private enterprise, and teaching.

## **WHY GEOGRAPHY?**

Contemporary Americans have access to an unprecedented quantity of information, and to sophisticated means of acquiring, disseminating, and analyzing this information. Yet, given these potential means of enhancing our geographic awareness and global understanding, most Americans--living in the Age of the Atom (or Satellite, or Computer, or. . .)--continue to possess little more than a "Stone Age" awareness of the world in which we live and upon which we depend for our very survival.

To individuals lacking a well-developed "mental map" of Earth's surface and its varied mosaic of physical and human conditions--the very heart and soul of geographic knowledge--the globe must appear as a fragmented and confusing hodgepodge of meaningless and unrelated phenomena. There is a world inhabited by faceless peoples and cultures who lack a proud heritage, bonding institutions and customs, and spatial dimensions. Places, to the geographic illiterate, lack characteristic features, essential contexts of location, and spatial relevance. Their world is composed of vague physical features and life sustaining environmental systems for which they lack appropriate terminology, valid mental images, or understanding of causative agents or processes. The geographic illiterate also lacks sufficient knowledge of human use potentials to render wise decisions relating to human use and conservation of our finite global natural endowment.

To persons with no understanding of geography, temporal events occurred in a spatial vacuum, with "history" and "geography" being unrelated in space and time. Such individuals, though constantly confronted by critical problems and issues, sadly lack reasoned criteria on which to base rational analyses, judgments, or attempts at resolution. To the geographically unaware, human differences often appear to be threatening and can constitute the basis for feelings of prejudice and acts of discrimination. Such individuals are prisoners of their own ignorance and provincialism. How poorly equipped they are to assume meaningful citizenship in the increasingly interdependent global community!

It stands as a rather sad and somewhat inexplicable indictment of this country's public priority and educational system that among the world's educated industrial societies, Americans rank among the least literate in geographic knowledge and, perhaps worse, curiosity. Examples of geographic "illiteracy" are numerous, as are the increasingly apparent and damaging consequences--be they social, economic, political, military, or environmental--of our failure to provide citizens with adequate geographic training.

In most countries of the Western urban-industrial world (and in many Less Developed Countries (LDCs) as well), geography constitutes the "core" of the social *science* curriculum. The United States is unique among these nations in relegating geography to a relatively minor role in both the elementary and secondary curriculum. Although considerable progress has been made in terms of enhancing geography's position in the curriculum during recent years, it remains a sad and somewhat shocking

indictment of our educational priorities that most of the world's educated people are much better informed about the world (and often about the United States!) than are the majority of our own citizens!

In an increasingly complex, troubled, and closely intertwined world community of cultures and nations, Americans simply do not know much about our global neighbors (or, for that matter, about even ourselves in a geographic sense). We have little understanding of, or feeling for, their lands and peoples, their resources, capabilities, or attainments; we are ignorant of their cultural similarities and differences, of their hopes and dreams, and of their problems and needs. Perhaps of greatest importance, we fail to understand how important they have become to us and we to them. How can Americans expect to maintain a position of leadership, strength, and respect within a world of nations about which we know--and seemingly care--so little?

Now, more than ever, citizens can ill-afford to remain ignorant of the world about us. The compression of time and space resulting from the technological "explosion" has placed even our most remote neighbors at our very doorstep. It is essential that all Americans understand and appreciate their role and responsibility in an increasingly complex global community. Each of us must be aware of Earth's fundamental physical and cultural patterns; its key locations and divisions; and its primary networks and systems. We also must understand our planet's basic areas of production and consumption, its major spatial interrelationships, and conflicts.

Geography is the ancient and time-honored field of study that can best provide the essential training needed to ensure that our citizens are prepared to assume responsible and enlightened leadership in the complex and demanding global community of the 21st century.

T. S. Eliot wrote, "*We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and to know the place for the first time.*" We must think globally and act locally. By better knowing the world about us, we come to better know ourselves

## GEOGRAPHY'S "FIVE THEMES"

The word "geography" conveys a rather fuzzy image to many Americans. When thinking "geography," many things may come to the non-geographer's mind. To many people, geography connotes the laborious memorization of states, capitals, leading products, and other trivial data. When taught as geotrivia, the subject becomes a load on the memory, rather than a meaningful light in a student's mind. Others, particularly many teachers of history and social studies, restrict the meaning of geography to aspects of Earth's physical elements--its landforms, weather and climate, plant and animal life, water features, and so on. In still other instances, "teaching geography" simply means occasionally using wall maps to point out the location of places.

Geographic educators are sensitive to the fact that the science suffers from limited public understanding. When the nature of geography is not known and the vital contributions of geographic awareness remain vague to educators, geography is diminished as a classroom subject. Paradoxically, while geography thrives in the nation's colleges and universities, the subject has languished in the American school curriculum during most of the 20th century. Much of the problem can be attributed to geographers' inability—at least until recently--to present a clear, concise, and relevant agenda for their discipline as a classroom subject.

Geography is somewhat unique among the sciences. Similar to history, geography is a field of study based on a distinct *way* of organizing and analyzing information, rather than on the study of a particular phenomenon, or a discrete body of information. Historians use the temporal methodology in asking "when?"; Geographers employ a *spatial* methodology, asking "*where?*" in reference to places and conditions on Earth's surface.

Describing and explaining patterns of spatial organization--the distribution of Earth's physical and cultural features--is fundamental to geographic inquiry. Fundamentally, geographers seek to know and to explain *what is where, why there, and why care* in regard to the varied features of Earth's surface. This is a difficult and challenging task. Geographic study entails a vast body of factual information (far more than any individual can master) and involves the application of numerous concepts.

Most geography educators recognize the futility of an attempt to teach the world (or any area thereof) in factual detail. Geography instruction, to be most effective, must focus on the development of geographic concepts and fundamental skills such as map reading. Founded on this conviction, a Joint Committee on Geographic Education of the National Council for Geographic Education and the Association of American Geographers was formed in the early 1980s. It was this committee that developed guidelines for teaching geography as a dynamic, conceptually based science, *Guidelines for Geographic Education: Elementary and Secondary School* (1984). The landmark publication presented five fundamental themes (concepts) that are foundational to the teaching and learning of geography: *location, place, interaction, movement, and region.*

The five themes help answer questions that are essential to understanding the complex mosaic of spatial patterns formed by the distribution of Earth's varied natural and human features.

**Location** answers the question "Where is it?" with reference to the specific or relative position of places on Earth's surface. Where are you at this moment? In how many ways can your location be described? As teachers, we are constantly describing the location of places. In so doing, we are using the most basic of all geographic concepts.

**Place** helps answers the question "What is there? What is it like?" Features and conditions of place--both physical and human--give meaning and character that set each place on Earth's surface apart from all others. What are the major natural features where you live? How would you describe the population and settlement patterns in your area? How are the land and other resources used? What aspects of culture--language, religion, social patterns, political system, and economic activity--are important there?

Understanding **interaction** between cultures and the natural environments they occupy often helps to explain the nature of places, "Why is it like this?" All places have certain advantages and disadvantages for human land use and settlement. Each culture establishes its own unique relationship to the physical Earth. Each human group, based on its needs, tools and skills, and perceptions, culturally adapts to, uses, and modifies the natural environment in some way. In so doing, it creates its own distinct imprint on the land, the cultural landscape. In what chief ways have we culturally adapted to our natural environment? What are our important resources? Do we use the environment in the same way as did earlier residents of the area? How have we changed the natural environment?

**Movement** explains "How are places connected or linked?" What comes and what goes, from and to where, and why? The concept establishes the importance of flow and linkages as people, ideas, resources, commodities, and other elements move from place to place over the earth. How is movement important to your community? What patterns of movement are evident within your area of residence?

Finally, the concept of **region** addresses the question, "How can places be grouped?" Regions are the basic unit of geographic study. In terms of organizing and analyzing data, they are to the geographer what the period or era is to the historian--a means of simplifying the classification of information and placing it in manageable units. In what major regions is your area included?

Whether teaching geography, history, global studies, or social studies, the five geographic themes provide a sound conceptual framework for the study of Earth's diverse physical and human conditions.

## GLOSSARY OF MAP AND GLOBE RELATED TERMS

- ALTITUDE.** Vertical elevation or height, often of an object such as a plane or cloud, above given elevation such as sea level, or local terrain [not to be confused with *elevation*].
- ANALEMMA.** A diagram usually in the form of a “figure 8” appearing on many globes that shows the latitude of the vertical sun for any day of the year, the differing rate of apparent north-south movement of the vertical sun from month to month, and the difference between solar time and mean solar time for any day of the year.
- ANTARCTIC CIRCLE.** The “line” marking the farthest position of the *circle of illumination* beyond the South Pole, or  $66\frac{1}{2}$  degrees South Latitude; point from which all places between it 90 degrees will experience at least 24 hours with/without the sun appearing above the horizon.
- APHELION.** Point in Earth’s orbit at which it is farthest from the sun.
- ARCHIPELAGO.** A group, or chain, of islands (e.g., the Aleutians, Indonesia)
- ARCTIC CIRCLE.** The “line” marking the farthest position of the *circle of illumination* beyond the North Pole. It is  $23\frac{1}{2}$  degrees from the Pole and  $66\frac{1}{2}$  degrees from the Equator (North Latitude).
- BAY.** An arm of a lake, sea, or ocean.
- BUTTE.** An isolated, steep sided landform feature [generally smaller than a mesa, or plateau; may or may not be flat topped]
- CANAL.** An artificial water course, used for navigation [Suez, Panama], water diversion [Central Arizona Canal], or irrigation.
- CANYON.** A deep, relatively narrow valley with steep sides. Canyons are formed by stream erosion in mountains or plateaus.
- CAPE.** A point of land extending into a body of water.
- CARTOGRAM.** A “map” that lacks one or more essential map elements.
- CARTOGRAPHY.** The science and art of map making.
- CHRONOMETER.** An accurate clock or watch used by seamen to determine longitudinal position.
- CIRCLE OF ILLUMINATION.** The *great circle* that is located between the lighted and unlighted halves [hemispheres] of Earth’s surface at any given moment
- CONTINENTAL SHELF.** The submerged portion of continents. Often a gently sloping submerged plain that suddenly plunges [*continental slope*] to the ocean basin at a depth of ca. 100 fathoms [600 ft.].

**CONTOUR LINE.** Line on a map that connects points of equal elevation [see *topographic maps*].

**CULTURAL FEATURE.** Any feature on Earth's surface resulting from human action.

**CULTURAL LANDSCAPE.** Human imprint on Earth's surface.

**DELTA.** Land formed by the deposit of silt at the mouth of a river [takes name from the 4<sup>th</sup> letter in the Greek alphabet, triangular in shape, as applied to the triangular flood plain near the mouth of the Nile River].

**DIVIDE.** Higher ground between river basins, causing streams to flow in different directions and into different water bodies.

**DOWN.** Direction of the center of Earth [gravity attracts objects "downward"]. Should *never* be used in reference to "south."

**EAST.** Direction toward which Earth is rotating on its axis. Opposite direction to west.

**ECLIPTIC.** "Path" established by the annual revolution of Earth. The *plane of the ecliptic* is the plane formed by Earth's orbit and is inclined 23 ½ degrees from the plane of the Equator.

**ELEVATION.** Land based vertical distance above mean sea level [not to be confused with *altitude*].

**EQUATOR.** A *great circle* located midway between the poles; point at which duration of sun above/below the horizon is 12 hours/12 hours throughout the year.

**EQUINOX.** The moment the center of the sun crosses Earth's equator, at which time the circle of illumination extends from pole to pole; on the equinox, days and nights are of equal duration at all latitudes, and the sun rises due east and sets due west. There are two equinoxes each year. One occurs about March 21<sup>st</sup> and the other about September 23<sup>rd</sup> [first day of spring and first day of autumn in the Northern Hemisphere, with seasons in opposition in the Southern Hemisphere].

**ESTUARY.** An arm of the sea or other large water body formed by the mouth of a river [indentation, rather than protrusion; usually formed by rising sea level or submerged coastline].

**GEOGRAPHIC INFORMATION SYSTEMS (GIS).** Integrated computer tools for the mapping, handling, processing, and analysis of geographic data.

**GEOGRAPHY.** The science of Earth's surface based on the spatial distribution of its physical and cultural features [in layman's terms, the science that studies what is where, why it's there, and why we should care in regard to the physical and human features of Earth's surface].

**GLOBE.** A spherical representation of the earth.

**GRADIENT.** Ratio of vertical relief [up or down] to horizontal distance.



**GROWING SEASON.** The time between the last killing frost in the spring and the first killing frost in the autumn, often expressed as an average of dates, e.g., “a 140 day growing season.”

**GULF.** An arm of a sea or ocean [ arbitrarily used and of little meaning; there is very little distinction between gulf, bay, and sea].

**HACHURES.** Shading used on maps to depict elevation, slope, and physiographic features.

**HARBOR.** A natural, manmade, or artificially protected place of safety for vessels; a *port*.

**HORIZON.** A circle, surrounding an observer, where earth and sky seem to meet.

**INCLINATION (OF EARTH’S AXIS).** The angle of 23 ½ degrees between the *plane of the ecliptic* and Earth’s axis.

**INTERNATIONAL DATELINE.** Imaginary and arbitrarily established “line” generally coinciding with the 180<sup>th</sup> meridian. Point at which the “new calendar days” begin, and where dates change when crossed [“tomorrow” when east to west; “yesterday” when west to east; W : Tu]

**ISLAND.** Land mass smaller than a continent that is surrounded by water.

**ISOLINES.** Lines on a map connecting places having equal value [more than 70 types, e.g., *isobar*, barometric pressure; *isobath*, ocean depth; *isochrone*, travel time; *isohyet*, precipitation; *isotherm*, temperature].

**ISTHMUS.** A narrow strip of land, with water on both sides, joining two larger bodies of land.

**LAKE.** An inland, enclosed body of water. Most are of glacial origin and contain fresh water [not to be confused with *reservoir*, which is a water body formed behind a dam].

**LATITUDE.** Angular distance north or south of the Equator measured in degrees. “Lines” are *parallels of latitude* and can measure distance in degrees, minutes, and seconds.

**LEGEND.** A brief description of symbols and other features used to identify features on a map; often referred to as the *key*.

**LOCAL TIME.** The time at any location determined by the zenith passage of the sun.

**LONGITUDE.** Angular distance east or west of the *prime meridian* (0 degrees longitude), measured by meridians in degrees, minutes, and seconds.

**MAP PROJECTION.** An orderly arrangement of parallels and meridians derived mathematically on a plane surface on which a map can be drawn. Patterns formed by these lines is called the *grid*.

**MERIDIANS.** North-south “Lines” on map or globe that measure degrees of longitude east and west of the prime meridian.

**METROPOLITAN AREA.** A city and its surrounding communities [*suburbs*].

**MOUNTAINS.** Conspicuous highlands with summit areas. Arbitrary designation, often relative.

**NADIR.** Lowest point; vertically downward from an observer; opposite of *zenith*.

**NAUTICAL MILE.** Length of one minute of latitude, or 6,080 ft [*statute mile* is 5,280 feet].

**NOON.** The instant the sun reaches its zenith; shadows will be cast in a north/south direction, or along a meridian.

**NORTH.** Direction along any meridian toward the North Pole, or 90 degrees north. A compass needle is attracted not toward the pole, but to a magnetic pole the position of which drifts. A magnetic reading, therefore, must be corrected to account for these differences.

**OASIS.** An area in an arid region which is made habitable and potentially productive by having a reliable supply of fresh water.

**OCEAN CURRENT.** A stream or flow of surface water in an ocean, generally created by prevailing wind systems. May be “hot” or “cold” depending on relative temperature differences of the surface water through which it flows.

**ORBIT OF THE EARTH.** Track or route followed by Earth as it revolves around the sun.

**PARALLELS.** East-west lines on globes and maps, that are parallel to the Equator and measure degrees of latitude north and south of the Equator.

**PENINSULA.** A large area of land extending into a body of water.

**PERIHELION.** Point in a planet’s orbit that is nearest the sun.

**PLAIN.** Relatively flat land with little surface relief; may be at any elevation.

**PLATEAU.** An elevated area of comparatively flat or level terrain, bordered on several sides by relatively steep escarpments.

**POLITICAL DIVISION (BOUNDARY).** Politically determined and established boundary line; may be surveyed, follow some natural feature, or coincide with some cultural boundary.

**RELIEF.** Surface irregularity, or terrain. Shown on maps by shading, hachures, or contour lines.

**RESERVOIR.** Artificially formed body of water, as a “lake” formed behind a dam.

**REVOLUTION (OF THE EARTH).** Annual motion of Earth around the sun.

**RIVER.** A (relatively) large natural stream of water flowing across land.

**RIVER BASIN.** Area drained by a river and its tributaries; also *drainage basin*.

**ROTATION (OF THE EARTH).** Turning of Earth on its axis once every approximately 24 hours; direction of rotation is from west to east (hence, “day” travels from east to west).

**SCALE.** The relationship of distance on the ground to distance on a map. Usually depicted *fractionally* [1:250,000], *verbally* [1” = 1 mile], or with a measure *bar* [ |\_\_\_|\_\_\_| ].

**SEA.** A body of water, usually saline, that has been designated a “sea” usually by virtue of some Unique characteristic, such as being partially enclosed.

**SEA LEVEL.** Horizontal line of contact between land and sea. Varies globally on the basis of atmospheric pressure, prevailing wind systems, and water temperature.

**SEXTANT.** A seaman’s instrument used to measure the altitude [angular distance from horizon] of celestial bodies for the purpose of determining latitudinal position.

**SIERRA.** Spanish word for “mountain.”

**SOLSTICE.** Time when the sun is directly overhead at noon above the point that represents its greatest distance north or south of the equator. The sun is vertically overhead at noon at the Tropic of Cancer (23 ½ degrees north) on or about June 21<sup>st</sup>, and the Tropic of Capricorn (23 ½ degrees South) on or about December 22.

**SOUTH.** Direction, along any meridian, toward the South Pole.

**STANDARD TIME.** Mean time of a selected meridian used over a belt generally 15 degrees wide. Standard-time meridians in the United States are 75, 90, 105, and 120.

**STATUTE MILE.** A measure of distance fixed by British statute. It is equal to 5,280 feet, or roughly 5/6<sup>th</sup> of a nautical mile.

**STRAIT.** A narrow strip of water connecting two larger water bodies.

**TOPOGRAPHY.** Technically, all features appearing in an area, but generally limited to terrain, or relief features. A *topographic map* is a map showing relief, usually by contour lines, and a variety of other selected physical and human features.

**TROPIC “LINES”.** Parallels on a globe or map that mark the latitudinal points of the sun’s Farthest point of vertical zenith. The sun is directly over the Tropic of Cancer (23 ½ degrees N) on or about June 21<sup>st</sup> and the Tropic of Capricorn on or about December 22<sup>nd</sup> [NOTE: it is incorrect to refer to the area between 23 ½ degrees N and 23 ½ degrees south at the “Tropics” in a climatological sense].

**UP.** Vertical direction away from the center of the earth.

**WEST.** The direction from which Earth is rotating.

**YEAR.** The period of time during which Earth makes one complete revolution of its orbit. It is equal 365.2422 mean solar days.

**ZENITH.** The point in the sky directly over a given point on the earth. Also, the highest point reached (*solar noon*) by the sun during its diurnal (daily) passage.

## ***UNDERSTANDING LATITUDE AND LONGITUDE***

### **I. THE NEED FOR A GRID SYSTEM OF COORDINATES**

#### **A. Locating places and things with precision**

1. Have students attempt to explain the location of a dot on a ping-pong ball or other unmarked sphere. Obviously, it cannot be done.
2. Why do we need to locate places and things on the earth's surface with a degree of accuracy?
  - a. Surveying
  - b. Navigation
  - c. Locating storms (e.g., hurricanes and typhoons at sea and tracking their courses); the location of ships or planes in distress; military operations; forest fires (particularly for flight crews who “bomb” fires with water or slurry), etc.
  - d. Locating places on maps or globes.
  - e. Global Positioning Systems (GPS) are now commonplace.

### **II. ARE THERE ANY NATURAL “LINES” THAT DIVIDE THE GLOBE (EARTH) INTO USEFUL ZONES?**

#### **A. East-West divisions:**

1. There are none (meridians of longitude are arbitrary).

#### **B. North-South divisions:**

1. “Lines” or points established by Earth/sun relationship:
  - a. *Equator* ( $0^{\circ}$  latitude) is midpoint between poles and point at which there is always 12 hours of daylight and darkness.
  - b. *Tropics of Cancer* and *Capricorn* ( $23\frac{1}{2}^{\circ}$  N & S) are the northernmost and southernmost points at which the sun will ever appear perpendicular overhead (June 22 and December 22, respectively: the *solstices*).

- c. *Arctic and Antarctic Circles* ( $66\frac{1}{2}^{\circ}$  N & S latitude respectively) and points at which there will be at least 24 hours of darkness or sunlight at solstices.
- d. The *North and South Poles* ( $90^{\circ}$  N & S latitude) are points at which the sun is above and below the horizon for six months, and the *axial* points around which the earth rotates. Illustrate by having students rotate a pencil point.
- e. *Parallels of latitude* are based on angular distance between the Equator ( $0^{\circ}$ ) and Poles ( $90^{\circ}$  N & S).

### III. ILLUSTRATING A “GRID SYSTEM”

#### A. A football field (“gridiron”)

- 1. 50 yard line = equator; to goal lines = poles

#### B. Graph paper

- 1. Give students a piece of graph paper (without letters or numbers) and ask them to locate certain points. Then ask them to think of a way by which the points can be located.

#### C. City streets

- 1. Draw a rough parallel and perpendicular street pattern on an overhead transparency and on a sheet for each student to use.
  - a. If your town had a grid pattern of streets, discuss the numbering and naming system.
  - b. Your map should have a Center Street and Main Street from which to number 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and so forth in each direction. Students will see that *direction* from the division line streets must be used. If your community uses a numbering system that can be adapted to this exercise, use it.
  - c. On the handout, locate several buildings or other features, such as a school, post office, fire department, police department, playground, grocery store, gas station, etc. Make sure you have something located in every quadrant of your map.

- 1) Have students locate features using the street numbers – first without the north/south or east/west designations. This would simply locate a street that spanned the entire community. Then have them do the same using the full naming system, e.g., the “school is located at the intersection of 4<sup>th</sup> Avenue West and 3<sup>rd</sup> Street North. They should become familiar with the system in a matter of minutes.

### III. THE EARTH’S GRID SYSTEM

#### A. Parallels of latitude

1. Measure degrees of latitude north and south of the Equator. The Equator is the base parallel (0°) and all numbering is done in degrees north and south of this point.
2. Parallels (degrees of latitude) north and south of the Equator are numbered up to 90° north (North Pole) and 90° south (South Pole).
3. The Equator is the only “*Great Circle*” parallel. If you were to cut through the earth or a globe at that point, it would be divided into two halves, or *hemispheres*.
4. All parallels run true east-west, but measure distance in degrees of latitude north and south (of the Equator).
5. All parallels intersect meridians at right angles.
6. An infinite number of parallels may be drawn (degrees °, minutes ', and seconds ")
  - a. Why do most maps and globes only show parallels and meridians at 5, 10, and 15, etc. degree intervals? (To avoid cluttering up the globe or map with lines).
  - b. There are approximately 69 miles in each degree of latitude. Using seconds ("), any point on the earth’s surface can be located to within approximately 100 feet.

#### B. Meridians of longitude

1. Measure degrees of longitude east and west of the *Prime Meridian* (0° longitude).

2. Meridians measure degrees of longitude east and west of the Prime Meridian to the 180° meridian. This approximates the International Dateline, though this line zigzags in places for the convenience of people living in the area of the 180° meridian. The system runs (as example), 10° west, 20° west, 30° west, etc, and 10° east, 20° east, 30° east, etc., until the 180° meridian is reached. Only the Prime Meridian and the 180° meridian lack a numerical counterpart.
3. All meridians are “Great Circles,” that is, if you were to cut through any of them, the earth would be divided into hemispheres. Each of them, therefore, is a long circle line (longitude).
4. All meridians run true north-south, but measure degrees of longitude east-west.
5. All meridians intersect parallels at right angles.
6. An infinite number of meridians may be drawn (degrees, minutes, seconds).
  - a. Use the globe to show that meridians converge away from the Equator. Therefore, distance between two points of longitude cannot be easily established for any latitude other than the Equator, where the spacing is approximately 69 miles per degree.

Note: The Prime Meridian was arbitrarily located at the Royal Observatory in Greenwich, England (near London) by an International Commission in 1884. Prior to that date, most countries established their own “prime meridian” (often running north-south through the nation’s capital). Discuss some of the obvious problems, which such a system would create (e.g., a radio plea for emergency assistance: “Help! We’re sinking! We are located at 45° north latitude and 30° east longitude. . . glub, glub, glub” [end of transmission, with no reference to which country’s prime meridian was received]).

## WHY BOTHER WITH LANDFORMS?

1. How have landforms influenced the distribution of Earth's available moisture? [Orographic precipitation; drainage basin]
  - Sierra Nevada and California's eastern deserts & Central Valley
  - Europe vs. North America
  - World's "exotic" streams
2. Vertically, how do landforms influence temperature distribution, land use potential, and human habitation?
  - Vertical zonation: Altiplano, highlands of East Africa, Central America
  - "Heidi" and *transhumance*
  - Changing human use patterns (e.g., skiing vs. farming)
3. How have landforms influenced history [military; migration; economic adaptation; settlement]?
  - Landforms/warfare and military technology
  - Plains and (alluvial; flooding) river valleys
  - Folk fortresses (e.g., Paris Basin); Mackinder's "Heartland" hypothesis
  - Changing perceptions of mountains, plateaus, and hill country (Appalachia, Ozarks, Rockies)
4. To what degree are landform areas (e.g., coastal plains, river flood plains, seismic zones, volcanic zones, etc.) also hazard zones?
  - Land as environmental hazard [earthquakes; volcanic eruptions; land/rock slide/flow; subsidence]
  - Natural *hazards*, or poor human choices?



5. To what degree do landforms contribute to “amenity” landscapes, recreational areas, tourist destinations, and so forth?
  - Where are people drawn, and why?
  - Societal change (relatively valueless to highest value)
  
6. How have landform features influenced human settlement?
  - Distribution of human population (ca. 90% located on plains)
  - How many toponyms (place names) can you think of that reflect the importance of landform features (e.g., Butte, Mesa, Pass, Valley, Gap, Falls, etc.)
  
7. To what degree have landforms influenced accessibility, transportation, trade, and other factors that involve movement?
  - Isolation afforded by mountains, islands, and peninsulas
  - Natural corridors, such as Middle East

## **TECTONIC FORCES: AGENTS BUILDING FROM WITHIN**

### (A) *DIASTROPHIC FORCES*

### (B) *VOLCANIC FORCES*

(1) **WARPING**    (2) **FOLDING**    (3) **FAULTING**

(1) **INTRUSIVE**    (2) **EXTRUSIVE**

**(Weight)**

**(Horizontal forces)**

**(Interior forces)**

**(Subsurface)**

**(Surface)**

up/down

up/down

any direction

Magma

Lava

Isostasy

Anticline

Vertical

Masses

Volcanoes

Geosyncline

Syncline

Horizontal

\*Batholith

\*Conical

\*Glacial ice

Monocline

Rapid

Fissures

\*Domal

\*Alluvium

\*Seismic/Richter

\*Dikes

Plateaus

Escarpments

\*Sills

Neck/plug

Caldera

**Hudson Bay**

**Appalachians**

**Sierra Nevada**

**Black Hills**

**Cascades**

NOTE: Most mountains are of complex origin, e.g., all three diastrophic and both volcanic forces have contributed to The formation of the Rocky Mountains

## **GRADATIONAL FORCES: AGENTS WORKING FROM WITHOUT**

### **WEATHERING**

(Prepare for transport)

#### **Chemical**

(Decompose)

Solution

\*Karst

+ Caves

+ Sinkholes

+ Travertine

#### **Mechanical**

(Disintegrate)

Ice crystal

Salt crystal

Thermal

Exfoliation

Organic

Diastrophic

### **MASS WASTING**

(Gravitational movement)

#### **Downslope transfer**

Creep

Flow

Slide

Slump

Avalanche

Materials

\*Talus

\*Scree

### **EROSION**

(Movement by physical agent)

#### **Lateral transfer**

Moving water

Waves & currents

Moving ice

\*Continental glaciers

\*Alpine/Mountain glaciers

Wind

Animals

Humans

## **MISSISSIPPI RIVER: MORE THAN JUST A BLUE LINE ON THE MAP**

**IN TEACHING PHYSICAL FEATURES, STUDENTS SHOULD BE MADE AWARE OF THEIR IMPORTANCE IN AS MANY WAYS AS POSSIBLE. THE MISSISSIPPI RIVER IS ILLUSTRATED BELOW AS AN EXAMPLE.**

1. A body of water beginning in northern Minnesota and flowing some 3,988 miles to the Gulf of Mexico (3<sup>rd</sup> longest river in the world, behind the Nile and Amazon rivers)
2. The Mississippi and its tributaries form a drainage basin that includes 27 states and four Canadian provinces, and drain over one-half of the total area of the United States
3. The river is the source of alluvial deposits that have, over millions of years, “built” the state of Louisiana [“Louisiana is a gift of the Mississippi”]
  - a. Deposition continues today at a rate of ca. 15,000 railroad cars filled with sediment each day, or the equivalent of a train 150 miles long
  - b. Weight of the sediment has caused a *geosyncline* (down-warp) 30,000 ft. deep
4. Periodic shifts in the lower river course have caused the location of the delta to change repeatedly, including at least five changes during the past 2,000 years. These shifts gave southern Louisiana many bayous (former river channels), stranded levee systems, and off-shore islands. Had the Corps of Engineers not intervened, the Mississippi River would have shifted its course into the Atchafalaya system in the mid-1960s.
5. A formidable barrier to east-west land travel and transportation
6. A major transportation artery: New Orleans (125 miles upstream, #3 port in the U.S.) and Baton Rouge (the head of navigation for ocean going vessels, 250 miles from the delta and the #9 ranking port in the country); barges as far north as Minneapolis-St. Paul
7. Of great historical importance in terms of exploration, travel, commerce, and settlement
8. A natural political boundary for all or part of 10 states, with tributaries defining the borders of many others
9. A vast, open, industrial and domestic sewer
10. A source of industrial and domestic water
11. An ecosystem for fish and wildlife
12. Recreation, particularly in upper course
13. Environmental hazard
14. Source of driftwood; sand and gravel deposits; breeding ground for mosquitoes; baptismal basin to some; landmark for aerial navigation; and much more

## WORLD POPULATION DATA (2001)

**WORLD:**      **6,137,000,000** (1.3% RNI; 2000 actual gain **70 million**)

### RATE OF NATURAL INCREASE (RNI):

1960	1.7% of 3.2 billion	= 55 million/year	(42 years/double)
1972	<b>2.0%</b> of 3.8 "	= 76 " "	<b>(35 " " )</b>
1975	1.9% of <b>4.0</b> "	= 76 " "	(41 " " )
1986	1.7% of <b>5.0</b> "	= 84 " "	(41 " " )
1994	1.6% of 5.5 "	= <b>88</b> " "	(43 " " )
2000	1.4% of <b>6.0</b> "	= 85 " "	(51 " " )
<b>2001</b>	1.3% of 6.1 "	= 80 " "	(54 " " )

<b>Net growth</b>	2.5	per second	(size of average American household)
	152	per minute	(small hamlet)
	9,125	per hour	(small town)
	219,000	per day	(a mid-sized city)
	1,538,000	per week	(Minneapolis/St. Paul metropolitan area)
	6,667,000	per month	(Chicago metropolitan area)
	80,000,000	per year	(population of Germany, #12 ranking country in world)

### POPULATION BY CONTINENT

	<u>POP</u>	<u>%</u>	<u>RNI</u>	<u>2X</u>	<u>LiExp</u>	<u>%URB</u>	<u>DENS</u>	<u>GNI/PPP**</u>
<b>WORLD</b>	<b>6,137</b>	<b>100%</b>	<b>1.3%</b>	<b>54 yrs.</b>	<b>67 yrs.</b>	<b>46%</b>	<b>118 psm</b>	<b>\$ 6,650</b>
Asia	<b>3,720</b>	<b>61%</b>	1.4%	50	67	37%	303	\$ 3,930
Africa	818	13%	<b>2.4%</b>	<b>29</b>	<b>54</b>	<b>33%</b>	70	\$ 1,790
Europe	727	12%	<b>- 0.1%</b>	<b>ZPG</b>	74	73%	187	\$14,970
N. America	491	8%	0.5%*	140*	77*	75%*	41*	\$31,260*
S. America	350	5%	1.7%*	41*	71*	74%*	66*	\$ 6,460*
Australia	19	<1%	.6%	110	<b>79</b>	<b>85%</b>	6	\$23,850

\* Indicates Anglo or Latin America, rather than continents; \*\* GNI in Purchasing Power Parity

### POPULATION BY COUNTRY (TOP 10)

China	1,273	# 1	0.9%	79 yrs	71	36%	344psm	\$ 3,550
India	1,033	# 2	1.7%	41	61	28%	814	\$ 2,230
<b>U.S.A.</b>	<b>285</b>	<b># 3</b>	<b>0.6%</b>	<b>120</b>	<b>77</b>	<b>75%</b>	<b>77</b>	<b>\$31,910</b>
Indonesia	206	# 4	1.7%	41	67	39%	280	\$ 2,660
Brazil	172	# 5	1.5%	45	68	<b>81%</b>	52	<b>\$ 6,840</b>
Pakistan	145	# 6	<b>2.8%</b>	25	58	33%	472	\$ 1,860
Russia	144	# 7	<b>-0.7%</b>	<b>ZPG</b>	66	73%	<b>22</b>	\$ 6,990
Bangladesh	134	# 8	2.0%	35	59	<b>21%</b>	<b>2,401</b>	\$ 1,530
Japan	127	# 9	0.2%	462	<b>81</b>	<b>78%</b>	872	\$25,170
Nigeria	127	#10	<b>2.8%</b>	<b>24</b>	<b>52</b>	36%	355	<b>\$ 770</b>

**PRIMARY SOURCE** "2001 World Population Data Sheet"  
Population Reference Bureau, Inc., , Washington, DC (\$4.50)  
www.prb.org

Charles F. Gritzner  
Geography/South Dakota State University  
Email: [Charles\\_Gritzner@sdstate.edu](mailto:Charles_Gritzner@sdstate.edu)

# THE CONCEPT OF “*OVERPOPULATION*”

## DEFINITIONS:

1. “Overpopulation is often used when **crowded** is meant, because it is extremely difficult to say when a **country** or **area** is really overpopulated. Overpopulation is perhaps best indicated when the **standard of living** is being **lowered** because the country or area has more **people** than its **resources** can **support**.”

(Sir Dudley Stamp)

2. Overpopulation is a condition reached when the **human population** of a defined geographic **area** exceeds the capacity of **available land** and other **resources** to **adequately provide** the **essential elements of survival** under existing **cultural** (i.e., social, political, technological, economic) and **environmental** conditions.

(Charles F. Gritzner #1)

3. Overpopulation is achieved when the **human population** exerts pressure upon the **land and resource base** to the degree that the **environment is degraded** (rendered less productive, less healthy, less regenerative, etc.) and will be **unable to sustain future generations** at the same **level of technology, scale of living, or life quality**.

(Charles F. Gritzner #2)

4. Overpopulation is a condition in which the **culture** of a defined **population** and **area** is unable to **adequately provide** the **basic needs** of that population as determined by its own **perceptions** and **standards**.

(Charles F. Gritzner #3)

## PRIMARY VARIABLES

- |                                      |                               |
|--------------------------------------|-------------------------------|
| 1. Crowding                          | 9. Essential elements         |
| 2. Country or area                   | 10. Culture & Perceptions     |
| 3. Standard/Scale of living (change) | 11. Pressure on resource base |
| 4. People/Population                 | 12. Environmental quality     |
| 5. (Available) Resources             | 13. Sustainability            |
| 6. Area/Region                       | 14. Technology                |
| 7. Available land                    | 15. Life quality              |
| 8. Adequate provision                | 16. Future                    |

### ***DID YOU KNOW THAT. . . .***

- 1) Fewer people are starving or undernourished today (as a percentage of the human population) than at any previous time in human history?
- 2) The concept of “overpopulation” has little to do with numbers of people?
- 3) Population density, per se, has no bearing whatsoever on “overpopulation”?
- 4) The population growth rate has declined to such a low level in some countries that it threatens the social, economic, and political well-being of nations?
- 5) There is no direct correlation between the human population (numbers of people) and such concerns as environmental degradation and resource depletion?
- 6) At a local scale, natural resources and agricultural production have little, if anything, to do with levels of human well-being?
- 7) Vast frontiers exist for human settlement employing existing capital and technology?
- 8) That more unoccupied, or under-occupied, land exists today than at any time during recent centuries?
- 9) The economy of many countries and areas is suffering because of excessive amounts of food?
- 10) In constant dollar value, food, fuel, metals, and nearly all other raw materials and natural resources are at historic lows?
- 11) The worst possible thing that we can do to help countries that face repeated famine is to provide them with direct food assistance?
- 12) The concept of “carrying capacity” is invalid as it pertains to Earth’s ability to support a growing human population?
- 13) If American methods of agricultural production, processing, and distribution (technology and practice) were adopted by countries and cultures throughout the world, it would be impossible to adequately feed the existing human population?
- 14) A direct correlation exists between high fertility rates and poverty, and the desire for large families—i.e., poor people consider children to be valuable resources?
- 15) The #1 problem facing the contemporary human population is the probability of China, India, and other Third World Countries raising their scale of living?

## ***WHAT, THEN, ARE THE PROBLEMS?***

- 1) Economic aspects of food production & distribution
- 2) Food preservation
- 3) Food consumption/preferences
- 4) Political institutions & instability
- 5) Problems within the rural environment (development, demographic, infrastructure)
- 6) Support of low food prices for urban populations (LDC's)
- 7) Corruption
- 8) Conflicts that disrupt traditional systems
- 9) Role of women in many traditional societies
- 10) Perceived value of children
- 11) Illiteracy
- 12) Religion (including dietary restrictions)
- 13) Changing global economies (rural to urban, agricultural to industrial)
- 14) The "New World Order"
- 15) Culture and consumption

**Please note that each of the 15 items listed above is *cultural*, rather than *demographic*, in nature.**



## THE CULTURAL DEFINITION OF NATURAL RESOURCES

### OBJECTIVES: Students will be able to

- (1) Define natural resource (vs. natural elements)
- (2) Classify natural resources by type (e.g., renewable and non-renewable; animal, vegetable, mineral; energy, building, other)
- (3) Recognize the role of culture in identifying, using, and modifying natural resources

### CLASS PROCEDURE AND ACTIVITIES:

- (1) Identify Earth's **natural elements** by category: Animal, vegetable, mineral, other (e.g., wind, sun)
- (2) Identify use categories for elements, e.g., Energy, building, growing (soil, rain, etc.)
- (3) Distinguish between natural elements (things in nature) and **natural resources** (things in nature that are of use to humans). Natural Resource is an economic concept.
- (4) Define, illustrate, and discuss each of the following terms:
  - Renewable resources** (e.g., water, soil, timber, wind, animal life)
  - Recyclable resources** (e.g., many metals, water)
  - Non-renewable resources** (e.g., gold, petroleum, gravel)
- (5) Divide blackboard into three large sections. Ask students to identify some of the natural resources that *Native Americans* living in their region used and put answers on board. Next, have them identify some of the natural resources that became important after the coming of *early European peoples* and place these elements on the board. Finally, have students list the major natural resources that are *important to people in your region today* and place these items on the board.
- (6) Have students compare and contrast their answers. After they have noted the differences, have them attempt to explain the differences (perceptions of what is useful; technology--for example, the Indians did not have the harness and plow, barbed wire, and windmill, all of which were essential to the settling and farming of the plains; subsistence vs. commercial economy; tourism; and so forth).
- (7) Identify and discuss important local resources & their use.

# REGIONAL GEOGRAPHY: GENERAL GUIDELINES & CONSIDERATIONS

## WHAT ARE THE GOALS/OBJECTIVES?

1. To teach students the *most important* details about Earth's *most important* regions.
2. To *create a sense of excitement* and to *generate student interest* in the world about them, and to instill in them *a desire to learn* more about the world's lands, peoples, and countries.
3. To teach students *how to study* Earth's areas/regions as an endeavor of lifelong learning (tools, information sources, organizational and analytical techniques).
4. To teach students *important geographic elements* using the area/region studied as the medium. Each region or place has certain features or conditions that make it a special place. Emphasis should be on the unique and the most relevant features, rather than presenting a litany of trivia for each region studied. The fundamental question is: "What should assume the highest priority?"
5. To provide students with the *most important geographic concepts/ideas*, using the area as a case study *vs.* teaching specific details about the particular area, with only secondary consideration given to conceptual development (i.e., making geography a light in the mind, rather than a load on the memory). Special consideration should be given to geography's "Five Themes": *location* and its importance; the unique elements, both physical and human, of *places*; *interaction* between humans and the natural environments they occupy; the *movement* of people, resources and raw materials, manufactured goods, and ideas and information; and *region*, or areas possessing homogeneity of one or more elements.

## ABOUT THE REGION STUDIED?

1. What are the *chief unifying characteristics* of the region? What are the primary features that set it apart from other regions of the world?
2. How and *why is the region important* (to your state/area; to the United States; to the global community)?

3. What are the region's *most important internal features, conditions, and patterns, and relationships* (i.e., what are the most important aspects of the region's physical and human geography, including strengths, weaknesses, conflicts, and so on)?
4. What *geographic concepts* can best be developed in the context of this particular region. What sub-regions can best illustrate the macro-region's most important characteristics (e.g., Which African countries can best illustrate the most salient points that should be taught about the geography of that region)?
5. What historical (in the geographical sense, as well as that of the historian) events have been most instrumental in forming the unique character of the region?
6. What might be the region's future? What conflicts or problems may lie ahead? What potentials?

## MONSOON ASIA

**Monsoon Asia is characterized by “Eight R’s”:**

- (1) **Regions**  
Perhaps the most diverse of the world’s culture regions, ranging from: among the world’s most dry to most moist, highest to fertile lowland plains, rainforest to desert; hot to cold barren Plateau of Tibet; densely populated to uninhabited; cultural diversity from Pakistan to India, to Indonesia, to Japan, to China.
- (2) **Rain**  
Seasonal precipitation, resulting from monsoon conditions, characterize much of the region and constitute perhaps the single most important physical element.
- (3) **Rice**  
Rice is the dominant food crop grown throughout most of the region. It is this staple that makes possible the huge populations of the region. Rice culture, including terraced paddies.
- (4) **Rivers**  
Throughout history, the region’s rivers have played a very important role, e.g., the Indus, Ganges, Brahmaputra, Mekong, Yangtze, Huang, and others.
- (5) **Religion**  
Religion plays a very important role in the lives and cultures throughout much of the region. Hinduism, Islam, Buddhism, Shintoism, Taoism, and Christianity (Philippines) are among the faiths common to portions of the region.
- (6) **Rural**  
Although the region is home to the world’s largest urban complex, and the greatest number of cities with populations in excess of one million, it remains dominantly rural (approximately two-thirds).
- (7) **Revolutions**  
Monsoon Asia is the home of many significant cultural revolutions (that occurred independently of those which may have taken place in the Middle East or elsewhere in “Western Culture”; it also is a hearth of political, economic, and social unrest today—and an area that could profoundly alter the balance of world power.
- (8) **Residence**  
Monsoon Asia is home to nearly 60% of humankind.

# JAPAN: “MIRACLE OF THE ORIENT”

*“Japan should have been a colossal failure!”  
(Prof. T. J. Pempel)*

## PROBLEMS

## OVERCOMING PROBLEMS

[PHYSICAL]

- |  |   |
|--|---|
| <p>(1) <b><u>Small area &amp; rugged land</u></b></p> <ul style="list-style-type: none"><li>* 146,000 square miles (CA)</li><li>* Like CA. About 18% is flat, much of which is lost to urban sprawl</li><li>* “Too lands” (too high, too rugged too cold, etc.).</li></ul> | <p>(1) <b><u>Expand area by various means</u></b></p> <ul style="list-style-type: none"><li>* Turn to the sea (#1)<br/>(20+% of world’s fisheries)</li><li>* Ample capital to purchase food and raw materials</li><li>* Urban focus (land value of Tokyo worth more than USA)</li><li>* Futuristic, “create” space by building into sea, subterranean, etc.)</li><li>* Land use practices</li></ul> |
| <p>(2) <b><u>Fragmented and elongated</u></b></p> <ul style="list-style-type: none"><li>* Four major islands with 3,000+ smaller islands</li><li>* 2,000 miles SW-NE; 1,250 miles within 4 islands; no location more than 100 miles from sea</li></ul>                     | <p>(2) <b><u>Linkages &amp; strong cultural ties</u></b></p> <ul style="list-style-type: none"><li>* Excellent highway, rail (Shinkansen), air, and water (hydrofoil, ferry, etc.) connections</li><li>* Very strong social/cultural/political cohesion and sense of national being/unity</li></ul>   |
| <p>(3) <b><u>Environmental hazards</u></b></p> <ul style="list-style-type: none"><li>* Pacific “Rim of Fire” with earthquake, volcanic, and tsunami (“tidal” wave) threat</li><li>* Typhoons; floods</li><li>* Earth slide/flow</li></ul>                                  | <p>(3) <b><u>Planning &amp; engineering</u></b></p> <ul style="list-style-type: none"><li>* Planning &amp; zoning</li><li>* Construction</li><li>* Shoreline protection</li><li>* Emergency warning &amp; training</li></ul>  |

(4) **Remote & insular**

- \* Far removed from primary trading partners and world markets
- \* Remote from primary hearths of major cultural revolutions (Agricultural, Industrial, Commercial, Democratic)
- \* Cultural isolation

(4) **Overcame isolation by innovation**

- \* Shipbuilding (#1) and merchant marine (#1 ownership)
- \* High value/low bulk manufactured goods
- \* Create demand with high quality, fair cost, and world class sales force
- \* Develop regional economies rather than view as competition
- \* Very selective in terms of accepting Western traits

(5) **Very limited natural resources**

- \* Very few natural resources upon which to base industrial development (including fossil fuels and metals)

(5) **Dependence upon human Resources**

- \* High value/low bulk (labor intensive; value added)
- \* Japanese people as resource:
  - Disciplined (pride in work)
  - Ambitious
  - Organized (teamwork)
  - Work ethic (95% prefer work to leisure)
  - Educated; skilled
  - Well-trained sales force
  - Innovative (#1 in patents)
- \* “P-Q-R-S-T” formula
  - P = Productivity and pride
  - Q = Quality (design, labor, Control, product)
  - R = Robotization (mechanization)
  - S = Sales & savings (capital)
  - T = Technology

**[CULTURAL]**

(6) **Lack of adequate farmland**

- \* About 13% of land is suitable for farming

(6) **Alternative means of provision**

- \* <5% of the population is engaged in agriculture, and of that, only 14% farm full-time
- \* Labor intensive (640 vs. 25 labor days per acre/year) and productive (yields & profit; \$10-15K/acre/yr.)
- \* Turn to sea (aquaculture); agricultural terracing
- \* People, rather than soil, as chief resource (earn income, import & purchase food)

(7) **Self-imposed isolation**

- \* Ca. 300 years of deliberate isolation (mid-1500s to mid-1800s; fear of Catholics in Philippines)

(7) **Open door**

- \* 1853 – Commodore Perry
- \* 1868 – Meiji Restoration (reformers seeking to introduce Western technology but on a very selective basis)

(8) **Late start in Industrial/Commercial/Urban Revolutions**

- \* Emerged from “Closed Door” era lagging several centuries behind the industrial West

(8) **Adopted Western Practices concerning technology, capital**

- \* Selectively adopted certain Western ideas, but on a Japanese model; western ways were not imposed
- \* Modified Western traits in order to better adapt them to Japanese culture

(9) **Large population**

- \* 127 million, ranking #9 in world
- \* Density of 872 psm (U.S. = 77)
- \* About 50% of population of USA in area the size of CA, but like CA, only about 20% of country is settled – in terms of where the people are, the density is about 4X that of California

(9) **Avoided “Overpopulation”**

- \* RNI is .2% yr. (world = 1.3%. USA = .6; government encourages larger families)
- \* About 28 million in Tokyo/ Yokohama (culturally and psychologically adjusted to conditions of severe crowding)
- \* Maximize utilization of space
- \* \$25,170 PC/GNP (US \$31,900); able to support large, dense population at high scale of living

(10) **Devastated by World War II**

- \* Japan’s involvement in WW II was to gain resources and create a spatial buffer zone
- \* Tragedy of war, including atomic bombs

(10) **Not vanquished as a people**

- \* Learned from experience
- \* USA aid in rebuilding (newest technology and physical plants)
- \* Limit of 1% GNP can be spent on military = no drain on capital or human resources
- \* Technology emphasizes commercial, rather than military innovations



# **A GEOGRAPHY OF LATIN AMERICA**

## **I. GENERAL INTRODUCTION:**

### **A. KNOWLEDGE ABOUT THE REGION:**

1. What do we know about Latin America & Latin Americans?
2. Analysis of our knowledge, i.e., source and validity
3. What are some of the reasons that might explain our lack of knowledge of and interest in the region?

### **B. WHY IS LATIN AMERICA IMPORTANT TO US?**

1. Our neighbors
2. Economic interdependence
3. Regional political stability
4. Social/demographic stability
5. Growing Hispanic population & cultural influence in the U.S.

### **C. AMERICAS IN SPATIAL CONTEXT:**

1. Western Hemisphere
2. North & South America (continents)
3. Anglo & Latin America (culture regions)
4. Middle & Central America

### **D. HEMISPHERIC RELATIONS**

1. "American Culture Region" characteristics:
  - a. "New World" concept
  - b. European Voyages of Discovery
  - c. New World (cultural) Revolution

2. European cultural dominance imposed upon native populations (concepts of culture and acculturation)
3. A "Frontier attitude" toward environment and natural resources
4. Substantial settlement & economic frontiers exist
5. Highly clustered populations

E. CULTURAL CONTRASTS

**ANGLO AMERICA**

- Northern Europe
- English speaking
- Protestant/Catholic
- Few aborigines
- Industrial/urban
- Immigrants came to settle permanently
- "Melting pot"
- Viable systems

**LATIN AMERICA**

- Mediterranean Europe (Iberian)
- Spanish & Portuguese
- Catholic
- Extensive Indian populations (Mestizo)
- Urban w/less industry
- "Glory, God, & Gold" (and Get out!)
- Relative homogeneity
- Feudal systems retained

F. "TWO AMERICAS" CONCEPT

1. Spatial positions and importance
2. Continental contrasts

**NORTH AMERICA**

8 N to 84 N  
(4,000 miles)

9,000,000 sq. miles (#3)

Greatest area in mid-latitudes

**SOUTH AMERICA**

13 N to 55 S  
(4,750 miles)

6,850,000 sq. miles (#4)

Greatest area in tropics

Many good harbors

Few good harbors

Excellent interior  
waterways (developed)

Excellent interior  
waterways (frontier)

## G. LATIN AMERICAN UNITY

1. There are twenty (20) Latin American countries, excluding those of the Caribbean. Each country is highly individualistic and fiercely independent. They do, however, share many traits in common:
  - a. "What unites us in Spanish America is our beautiful language and our distrust of the United States." (Gabriela Mistral, Chilean Nobel Laureate, 1945) [and of each other!]
  - b. Conterminous geographical location
  - c. Common Iberian heritage, including 17th century "cultural baggage" that has hindered development and stability
  - d. Common religion
  - e. General lack of environmental awareness, concern, or ethic
  - f. Distrust of Anglo American institutions and frequent use of the United States as a scapegoat to mask their own domestic problems
  - g. Increasingly restless, discontent, impatient, frustrated
  - h. Weakness of basic institutions (government, economic, social, religious)
  - i. Dependence on mono-economies
  - j. Poorly integrated infrastructure
  - l. Questionable role in "New World Order"
  - m. Potentials of NAFTA

2. Common problems:
  - a. Widespread rural and urban poverty
  - b. Rural illiteracy
  - c. Social and economic inequality
  - d. Urban slums
  - e. Large international debts
  - f. Underdeveloped economically
  - g. Political & economic corruption
  - h. Internal conflicts: many order disputes, left vs. right, socio-economic class, and others

\*\*\*\*\*

**[NOTE: The following list of topics follows the sequence in which they appear in my own Geography of Latin America course. Emphasis on particular topics can and should be expanded or contracted to conform to the background, interests, and expertise of the instructor].**

## **PHYSIOGRAPHIC PROVINCES**

Lowland Plains (Amazon Basin, Orinoco Plain, Parana-Paraguay Plain, Pampas)  
Plateau (Patagonia)  
Highlands (Andes, Brazilian, Guyana)  
Cultural considerations: hazards, barriers

## **ECOSYSTEMS**

Controls and characteristics of weather & climate (temperature, precipitation, pressure, wind, storms)  
Climates/Ecosystems (Wet Tropical, Wet & Dry Tropical, Tropical desert, Humid Subtropics, Mediterranean Subtropics, Mid-latitude deserts, West Coast Marine, Highland) including water, soils, flora, fauna, and human use problems and potentials

## **ABORIGINAL HISTORY & CULTURES**

Prehistory (coming of earliest Americans)  
Pre-conquest traditional cultures:  
    Hunting-fishing-gathering  
    Specialized fishermen and shell fish gatherers  
    Specialized hunters  
    Simple farmers  
    Advanced farmers (Maya, Aztec, Inca)

## **EUROPEAN EXPLORATION & COLONIZATION**

Spanish (Glory, God, Gold)  
Portuguese (Sugar cane)  
"Line of Demarcation" (Treaty of Tordesillas, 1493)  
Approaches to solving the need for labor

## **NON-IBERIANS**

Blacks  
Other Europeans (Inquisition)  
Asians

## **INSTITUTIONS**

Hispanic character  
Latin American society  
Role of women  
The Church (past and present)

## **POPULATION AND SETTLEMENT**

Demographic conditions and trends  
Population distribution  
Urbanization  
Frontiers for settlement

## **ECONOMIC ACTIVITIES AND CONDITIONS**

Primary industries (farming, mining, fishing, lumbering)  
Secondary industries (industry)  
Tertiary industries (commerce & services)  
Quaternary  
Infrastructure

## **TRANSPORTATION AND COMMUNICATION**

- Land
- Water
- Air
- Communications
- Barriers (human and physical)

## **GOVERNMENTS**

Focus upon cultural complexity to illustrate sources of conflict:

- Native cultures
- European colonists
- Natural environment & resource base
- Economic system and activity
- Infrastructure
- Population
- Settlement
- Government

## **REGIONAL OVERVIEW**

- Andean America
- Brazil
- A-B-C countries
- Uruguay & Paraguay
- Guianas
- Mexico
- Central America
- Caribbean

## **LATIN AMERICA IN TODAY'S WORLD**

- Relations with USA
- Position in regard to regional and global economic development
- Problems and prospects for the future

## ASSESSMENT

Student assessment can and should assume a variety of forms. Not all students, after all, learn or perform in the same way. To the degree possible, yet while fully maintaining the integrity of evaluation in a *geography content* course, assessment should reinforce the learning experience by building upon knowledge, rather than by simply measuring knowledge acquired.

For many students, the great majority of information presented in this course will be new. K-8 teachers, in particular, generally are weaker in the physical areas of geography; yet they will be expected to master basic elements of the lithosphere, atmosphere, biosphere, and hydrosphere. They also must grasp the fundamental geographic elements and perspectives of a number of social sciences. The regional concept, as is true of many other geographic concepts to which they are introduced, will be new to many of them. Finally, nearly everything to which they are exposed must be placed in its proper spatial context. The task can be overwhelming. If students are “turned off” by their college exposure to geography, they will not be inclined (or able) to present the subject in a dynamic, enjoyable, meaningful manner in their own classrooms. Geography education suffered immeasurably from uninspired teaching during most of the 20<sup>th</sup> century.

In the Core Knowledge Curriculum, geography’s function is primarily that of a “service role”—that is, geographic knowledge serves as a foundation upon which other subjects, history in particular, can build. Therefore, it becomes even more imperative that students develop the knowledge, skill, perspective, and positive *attitude* needed not only to teach geography, per se, but also to provide their own future students with the geographic understanding that is necessary to view other subjects—both physical and human—in terms of their spatial patterns and relationships. Historical events, for example, happen in some specific location and for some reason. Consider the history being etched into the landscape of the Middle East during the first years of the 21<sup>st</sup> century. Conflicts within the region involve: complex environmental resource issues; disputed territorial claims; religious differences; a host of complex social issues; internal and external political pressures; and economic matters ranging in scope from local to global. All of the foregoing conflicts have a major geographical component.

A variety of assessment options are open to instructors of this course. Each chapter in the recommended textbook concludes with a series of subjective “thought” questions. Their use is encouraged. The textbook is accompanied by an ancillary “MicroTest III” that provides a 872 test questions that include true-false, multiple choice, completion, and short essay formats. The following pages contain suggestions of assessment exercises, or projects, that will help students learn content, gain experience in organizing and analyzing geographic information, and also will provide them with basic geographic skills and information that will be extremely useful to them once they reach their own classrooms. Both exercises will test the students’ organizational skills,

geographic aptitude, discipline, and work ethic, all of which are key ingredients of successful teaching.

## “A GEOGRAPHY OF . . . . .”

### **EXERCISE:**

During the semester, you will prepare a detailed “geography” of a selected country of your choice. Work will progress from chapter to chapter, hence, the project will occupy the entire term.

[See Text, Chapters 1 and 13; Goode’s World Atlas; various essays and outlines that appear elsewhere in the appendices. Sequence of textbook chapters will serve as the outline for the exercise].

### **RATIONALE:**

The exercise has several primary objectives. Among them, you will:

- (1) Gain invaluable experience in using an atlas to acquire geographic information (an atlas is perhaps the geography teacher’s most useful resource);
- (2) Gain useful practical experience in applying information gleaned from the textbook and lectures, with the end product being not only the knowledge and experience derived, but what should be a useful classroom teaching resource as well;
- (3) Become familiar with the regional concept, the geographer’s primary way of organizing and presenting geographic information, in a way that ultimately should be useful to you in your own teaching environment.

### **MATERIALS:**

In addition to the textbook and *Goode’s World Atlas*, you will need a notebook or binder of some type.

### **PROCESS:**

Each chapter will serve as a sequential step in the development of your country geography. In Chapter 1, for example, you will apply such concepts as the nature of geography, location and its importance, distance, and so forth. Using these (and perhaps other relevant) topics from the textbook, you will use the atlas to acquire specific information. The textbook and lectures will serve as a general source of information, including explanation (e.g., why does much more rain fall on one side of the mountain than on the other?); *the atlas will serve as your specific source of primary data.*



While during the course of the semester you should consult all maps, graphs, charts, tables, etc., in the atlas, not all data need be used. Use your judgment in terms of detail. As a general guideline, imagine that the outline will be used in teaching students in a middle school geography class.

Description, explanation, and assessment of importance should be included in your work when relevant. For example, an area of very high population density should be explained (e.g., fertile soil and productive agriculture; industry and commerce, etc.); or, conversely, an area of very low population density also begs explanation (e.g., very cold; desert; mountainous; etc.). In essence, this is *your* project. You want it to be thorough and useful!

### **ASSESSMENT:**

Other than using the resources mentioned above, this is not intended to be an in-depth research project. You do not have to “fill in the gaps” of information lacking, e.g., culture history of the people, which in most instances will not be evident from information presented in the atlas.

Grades will be based on the following criteria:

- |     |   |     |
|-----|---|-----|
| (a) | Evidence of mastery of geographic information   | 50% |
| (b) | Use of atlas as data source   | 25% |
| (c) | Appropriateness for classroom use, applicability, neatness, evidence of professionalism | 25% |

## ASSIGNMENTS PER CHAPTER

[NOTE: All assignments should be directed toward students in the middle elementary grades, unless you specify otherwise. “Lessons,” as here defined, amount to a basic outline and “plan of action” no more than one page in length]

### Chapter 1.

Why are geography and history the ideal “core” studies of a social studies, or social science, curriculum?

For each of the following, write a definition and draft one question that you could use with K-8 students (you select the grade level) that would help them to better understand each of the following concepts:

- (a) Geography’s spatial approach
- (b) Absolute location
- (c) Relative location
- (d) Direction
- (e) Distance
- (f) Access/isolation

### Chapter 2.

It is often said that “Maps are a geographer’s ‘best friend’.” List and/or describe five reasons that you could present to a class that would illustrate how/why this is true.

Prepare a one page lesson plan that includes all techniques, concepts, skills, and so forth that you would want to convey in teaching map making to a group of elementary students.

### Chapter 3.

Prepare a one page lesson in which you introduce the importance of landforms (mountains, plateaus, hills, and plains; minor features, such as valleys, peninsulas, and various natural hazards such as earthquakes, volcanic eruptions, and so forth--as they may be relevant) to a class.

Prepare a once class period lesson in which you make students aware of the physical processes were most responsible for creating the landforms of your region. [Some areas are quite homogeneous in terms of landform features, where others are extremely complex. You may select the scale of your region or area; try to include at least some diversity in terms of geomorphic agents].

## **Chapter 4.**

In your own words (using such visual illustrations as you like), devise lessons in which you attempt to teach students the reason for day and night, seasons, and temperature differences.

Using the precipitation map of the United States, write a brief (short paragraph) explanation for each of the following areas: (Be sure to mention each of the primary causes of precipitation: convectional, orographic, and frontal/cyclonic as appropriate)

- (a) Wet coastal area from northern California northward
- (b) Dry western interior
- (c) Summer dry/winter wet in southern California
- (d) Humid Southeastern U.S.

What storms occur within the United States, where are they found, when do they occur, and what can/should humans do to mitigate their threat of damage or destruction?

## **Chapter 5.**

Identify five significant ways that your local (you determine scale) environment has been impacted by human activity. Which of these impacts have been positive? Negative?

Devise a strategy for introducing the importance of environmental stewardship to your students and suggest several examples and/or ways in which they might get involved in environmental conservation/restoration/preservation.

## **Chapter 6.**

[Population dynamics tend to be rather abstract to youngsters, and many of the issues are value laden and subject to controversy].

Imagine that you are teaching in a school located someplace near your place of residence. Draft approximately five (5) questions [the appropriate number will vary with location] in which you get your students thinking about local population dynamics (e.g., growth or loss; push-pull factors; rural/urban changes; age of population and why, etc.).

The world's population continues to grow at a rapid, although decreasing, rate (c. 1.3% per year in 2002). Prepare an exercise (one class period) in which you would attempt to generate student thought and discussion pertaining to the consequences of growth or decline (both within your area and at a larger scale, e.g., the U.S. or even the world).

## **Chapter 7.**

Culture has been called “humankind’s adaptive mechanism.” All life forms have a limited habitat, or environment in which they can survive. Humans, we are told, are tropical by our biological nature. Develop an exercise in which you get your students to identify as many ways as possible in which culture (all those things that humans are able to do because we are human) has made it possible for us to live (wherever you are teaching).

Diffusion is an extremely important theme in cultural geography. Devise a lesson in which you make students aware of the degree to which movement—of people, ideas, and material items—is important to all of our everyday lives.

Prepare a lesson in which you teach cultural acceptance in an increasingly diverse, multi-cultural, society.

## **Chapter 8.**

Review pages 284 (Mental Maps) through 291. The section pertains to “mental maps” in several forms. Using one or more of the concepts presented, prepare an exercise in which you would have your students become involved in some form of mental mapping. Clearly indicate what they would map and what your follow-up objectives would be.

Prepare a lesson in which students identify places which evoke a positive impression and others that are perceived negatively [for lower grades, large photographs of various environments can be shown, e.g., city, country, humid, desert, hot, cold, mountains, plains, etc.]. After individual and group selections are made, students should discuss the reason(s) why they like/dislike the environments.

## **Chapter 9.**

Prepare a lesson in which students discuss the political boundaries of U. S. states in terms of their type, and whether they are adequate, or could be improved upon (and why). How might they redesign state boundaries to make them better conform to geographic (spatial, environmental, cultural, economic, etc.) reality?

Develop a lesson in which students identify and discuss primary causes of conflict between and among countries (include selected case studies). [Note: In many instances, the same conflicts that beset countries also pertain to those experienced by individuals].

## **Chapter 10.**

Prepare a lesson in which students identify and will better understand primary, secondary, and tertiary economic activities that are most important to your area. Include references to any specific advantages your area may have over others, and where/what the market is for the goods and services produced. [The purpose of this lesson is to make students aware of major economic activities in their area and their importance, and linkages between their area and elsewhere].

Prepare a lesson in which students identify (a specific number, perhaps 10) manufactured goods—by item and place of origin—that have come from other countries. The ultimate objective of the lesson is to get students thinking in terms of (a) the importance of international trade, (b) our recent shift from a North Atlantic to Pacific Rim focus in trade, and (c) what is imported from where in terms of primary resources and raw materials vs. value added, high value-low bulk, items.

## **Chapter 11.**

Identify important natural resources within your area and develop a lesson that spotlights their use. Include reference to such matters as importance to the community or area, conservation practices employed, future productivity (including viable alternatives should the resource or market decline), and so forth.

Devise an exercise that involves students in discussing ways in which they could save energy.

## **Chapter 12.**

(See text, list of urban functions, p. 446; many of the terms will have to be explained in terms youngsters understand, e.g., “retailing” by shopping). Using a map of your state, develop an exercise in which students identify (within the limits of their knowledge base) the primary function(s) of communities. In this context, many place names can provide valuable clues (e.g., in South Dakota, our two largest cities are *Sioux Falls* and *Rapid City*, the falls and rapid[s] components indicating the early importance of milling which, in fact, was the primary reason for the founding of both cities at their respective locations).

(Not all students are going to be familiar with an urban place). Prepare an exercise in which you have students identify and discuss various parts (locations, sections) of known cities that they like, and those urban functions that are of greatest interest and/or use to them (e.g., an amusement park, mall, airport, etc.). Depending upon your own environment, urban/rural environments can be compared and contrasted.