

WORLD GEOGRAPHY VIRGINIA SOL



CURRICULUM FRAMEWORK 2008 Edition

Emily Cook – Spring 2010

- WG.1** *The student will use maps, globes, satellite images, photographs, or diagrams to*
- obtain geographical information about the world's countries, cities, and environments;*
 - apply the concepts of location, scale, map projection, or orientation;*
 - develop and refine mental maps of world regions;*
 - create and compare political, physical, and thematic maps;*
 - analyze and explain how different cultures use maps and other visual images to reflect their own interests and ambitions.*

Variety of sources

- GIS (Geographic Information Systems)
- Field work
- Satellite images
- Photographs
- Maps, globes
- Databases
- Primary sources
- Diagrams



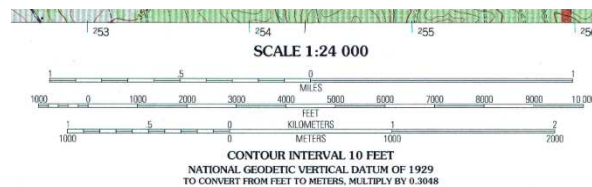
Globe



Paper Map



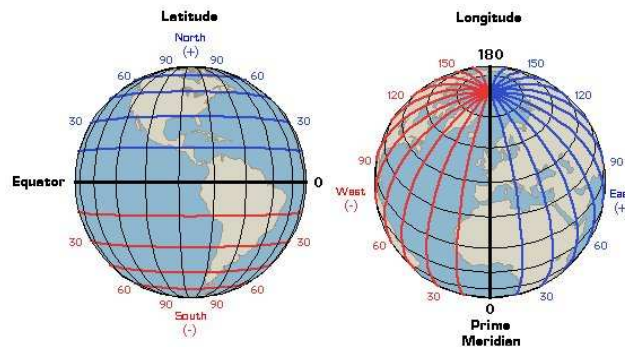
Mercator Projection



Robinson Projection

Concepts

- Scale
- Absolute location
 - Latitude
 - Longitude
- Relative location
- Orientation
- Map distortion
- Map projections
 - Mercator
 - Robinson
 - Polar



Polar Projection

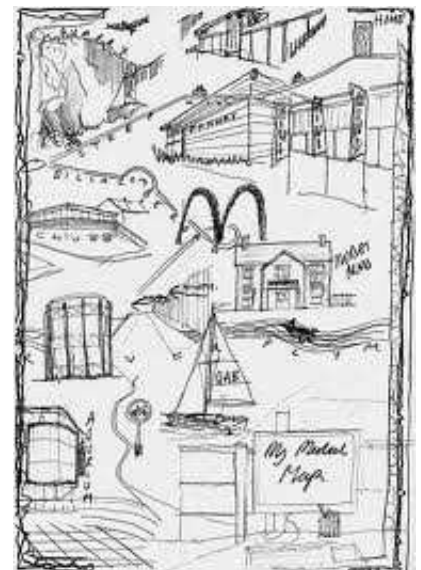
Uses of mental maps

- Carry out daily activities (e.g., route to school, for shopping)
- Give directions to others
- Understand world events

LATITUDE AND LONGITUDE

Ways mental maps can be developed and refined

- Comparing sketch maps to maps in atlases or other resources
- Describing the location of places in terms of reference points (e.g., the equator, prime meridian)
- Describing the location of places in terms of geographic features and land forms (e.g., west of the Mississippi River, north of the Gulf of Mexico)
- Describing the location of places in terms of the human characteristics of a place (e.g., languages; types of housing, dress, recreation, customs and traditions)



Mental Map

Standard ways that maps show information

- Symbols
- Color
- Lines
- Boundaries
- Contours



Contour Map

- Climate
- Precipitation
- Vegetation
- Physical
- Political



Map Key with symbols

Types of thematic maps

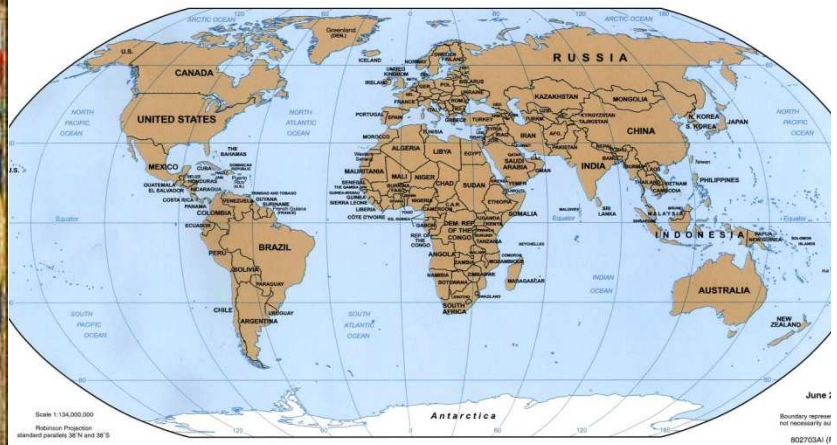
- Population (e.g., distribution and density)
- Economic activity
- Resource
- Language
- Ethnicity

Knowledge

- Map of Columbus's time
- Map of the world today
- GIS (Geographic Information Systems)



World Map During Columbus' Time - 1492



World Map - 2011

Place names

- Formosa, Taiwan, Republic of China
- Palestine, Israel, West Bank, Gaza

Perspectives of place names

- Arabian Gulf vs. Persian Gulf
- Sea of Japan vs. East Sea
- Middle East vs. North Africa and Southwest Asia

Boundaries

- Africa: In 1914; in the 1990s
- Europe: Before World War II; after World War II; since 1990
- Russia and the former Soviet Union
- Middle East: Before 1948; after 1967

Disputed areas

- Korea
- Western Sahara
- Former Yugoslavia
- Kashmir

WG.2 *The student will analyze how selected physical and ecological processes shape the Earth's surface by*

- identifying regional climatic patterns and weather phenomena and their effects on people and places;*
- describing how humans influence the environment and are influenced by it;*
- explaining how technology affects one's ability to modify the environment and adapt to it.*

CLIMATIC CHARACTERISTICS

- Temperature
- Precipitation
- Seasons (hot/cold, wet/dry)



CLIMATIC ELEMENTS

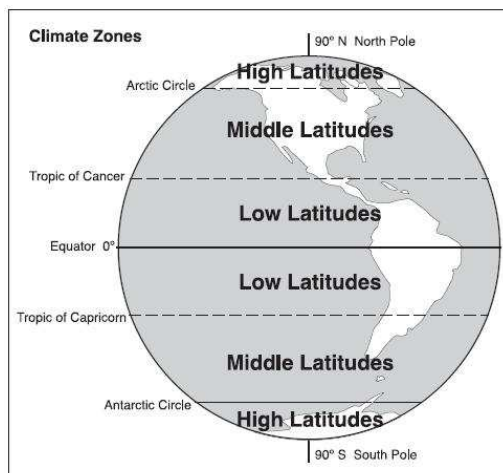
- Influence of latitude
- Influence of winds
- Influence of elevation
- Proximity to water
- Influence of ocean currents

WORLD CLIMATIC ZONES

- **Low latitudes** (e.g., tropical wet, tropical wet and dry, arid, semiarid, highland)
- **Middle latitudes** (e.g., semiarid, arid, Mediterranean [dry summer subtropical], humid continental, marine west coast, highland)
- **High latitudes** (e.g., subarctic, tundra, icecap)

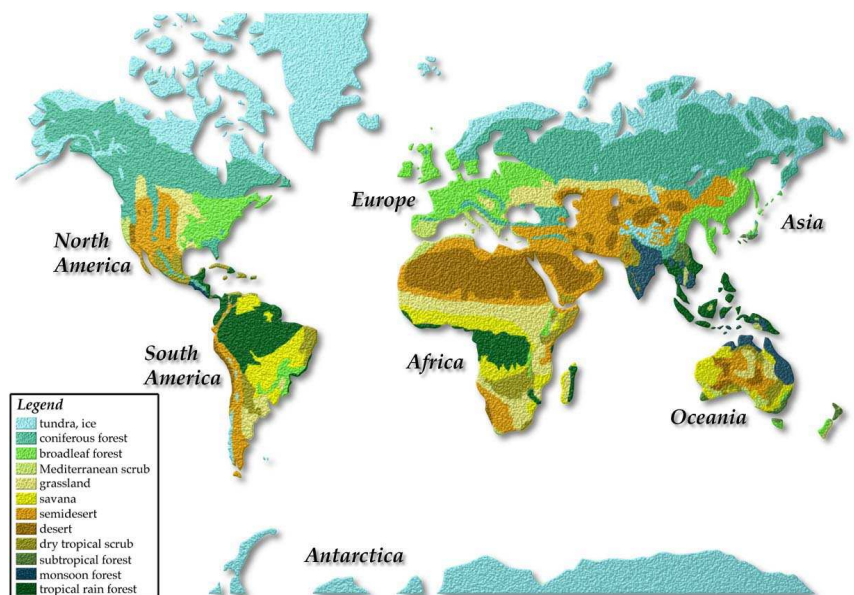
VEGETATION REGIONS

- Rain forest
- Savanna
- Desert
- Steppe
- Middle latitude forests
- Taiga
- Tundra



Source: Stephanie A. Hirsh, ed., *The United States: Its History and Neighbors*, Harcourt Brace Jovanovich, 1988 (adapted)

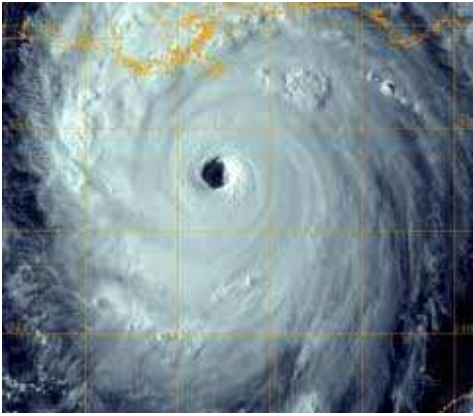
LATITUDE ZONES



VEGETATION MAP

WEATHER PHENOMENA

- **Monsoons:** South and Southeast Asia
 - **Typhoons:** Pacific Ocean
 - **Hurricanes:** Atlantic Ocean
 - **Tornadoes:** United States



HURRICANE/TYPHOON



TORNADO



MONSOON SEASON

CLIMATE HAS AN EFFECT ON...

- crops
- clothing
- housing
- natural hazards.



**Warm Weather
Clothes vs. Cold
Weather Clothes**

PHYSICAL AND ECOLOGICAL PROCESSES

- Earthquakes
 - Floods
- Volcanic eruptions
 - Erosion
 - Deposition



EARTHQUAKE DESTRUCTION



VOLCANO

HUMAN IMPACT ON ENVIRONMENT

- Water diversion/management
 - Aral Sea (shrinking due to irrigation)
 - Colorado River
 - Aswan High Dam
 - Canals
 - Reservoirs
 - Irrigation
- Landscape changes
 - Agricultural terracing (e.g., in China, Southeast Asia)
 - Polders (e.g., in The Netherlands)
 - Deforestation (e.g., in Nepal, Brazil, Malaysia)
 - Desertification (e.g., in Africa, Asia)
- Environmental changes
 - Acid rain (e.g., forests in Germany, Scandinavia, China, Eastern North America)
 - Pollution (e.g., in Mexico City, Chernobyl; oil spills)



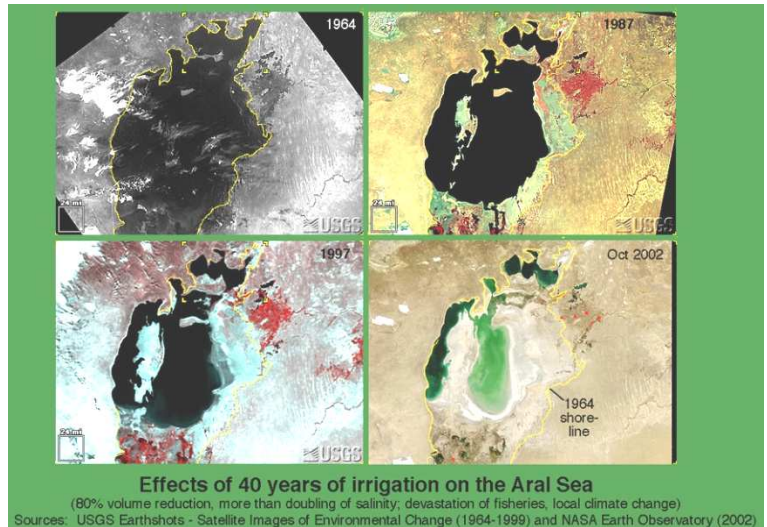
AGRICULTURAL TERRACING (mountain farming)

Influence of technology

- Agriculture (e.g., fertilizers, mechanization)
- Energy usage (e.g., fossil fuels, nuclear)
- Transportation (e.g., road building, railways)
- Automobiles (e.g., parking lots, suburbs)
- Airplanes (e.g., airport expansion, noise)

Environmental impact on humans

- Settlement patterns
- Housing materials
- Agricultural activity
- Types of recreation
- Transportation patterns



PROGRESSION OF ARAL SEA SHRINKING



POLDERS (CANALS AND WINDMILLS) **IN THE NETHERLANDS**



Primitive farming methods make it difficult to farm large pieces of land.



Technology has changed agriculture – access to machines makes it more efficient to farm.

WG.3 *The student will apply the concept of a region by*

- explaining how characteristics of regions have led to regional labels;*
- explaining how regional landscapes reflect the physical environment and the cultural characteristics of their inhabitants;*
- analyzing how cultural characteristics, including the world's major languages, ethnicities, and religions, link or divide regions.*

Regions are used to simplify study and understanding of the world.

Physical regions

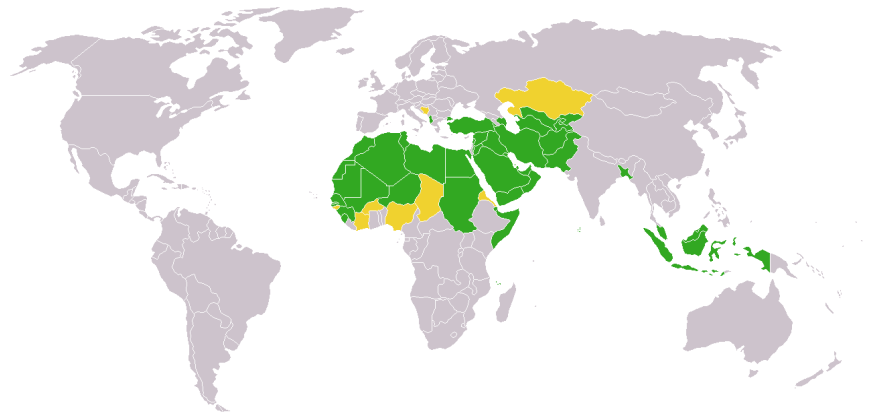
- Sahara
- Taiga
- Rain forest
- Great Plains
- Low Countries

Cultural regions

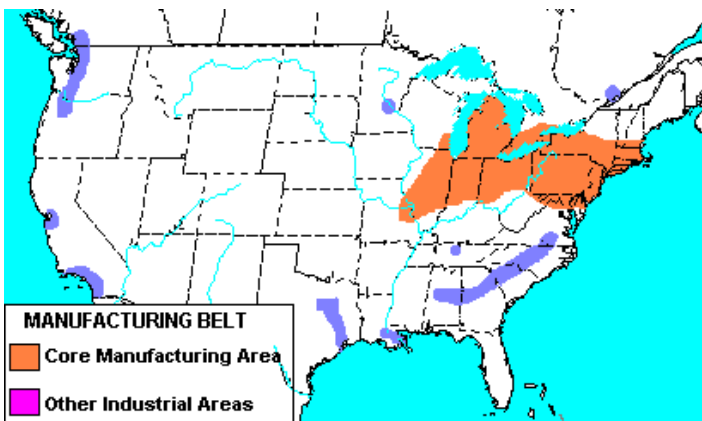
- Language
 - Latin America
 - Francophone world
- Ethnic
 - Chinatowns
 - Kurdistan
- Religion
 - Islam
 - Buddhism
- Economic
 - Wheat Belts
 - European Union (EU)
- Political
 - North Atlantic Treaty Organization (NATO)
 - African Union (AU)



FRANCOPHONE WORLD – French speaking countries as a result of French colonialism



MUSLIM WORLD – countries in which a majority of the population practice the religion of ISLAM



Regional labels reflecting changes in perceptions

- Middle East
- Sun Belt
- Rust Belt

Physical characteristics

- Climate affects types of natural vegetation.
- Landforms affect transportation, population distribution, and the locations of cities.

MANUFACTURING BELT → NOW THE “RUST BELT”

CULTURAL CHARACTERISTICS

- Architectural structures
 - Religious buildings (e.g., mosques, churches, synagogues, temples, pagodas)
 - Dwellings (e.g., tiled roofs in Mediterranean, chalets in Switzerland, thatched roofs in Pacific Islands, tents and yurts in Central and Southwest Asia, castles in Europe)
- Statues and monuments of local, national, or global significance

- **Taj Mahal (India)**



- **Kaaba (Mecca)**



- **Western Wall (Jerusalem)**



- **Dome of the Rock (Jerusalem)**



- **Church of the Holy Sepulcher (Jerusalem)**



- **Pyramids (Egypt)**



- **Kremlin (Moscow)**



- **Eiffel Tower (Paris)**



- **Virginia State Capitol Building**



- **Washington Monument**



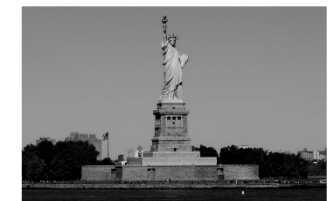
- **White House**



- **Lincoln Memorial**



- **Statue of Liberty**



Language

- Arab world: Arabic (Middle East/North Africa)
- Latin (Hispanic) America: Spanish
- Brazil: Portuguese
- Canada: French (Quebec) and English
- Switzerland: Multiple languages (French, Italian, German, English)
- English: International language – language of world business and trade

Ethnic heritage

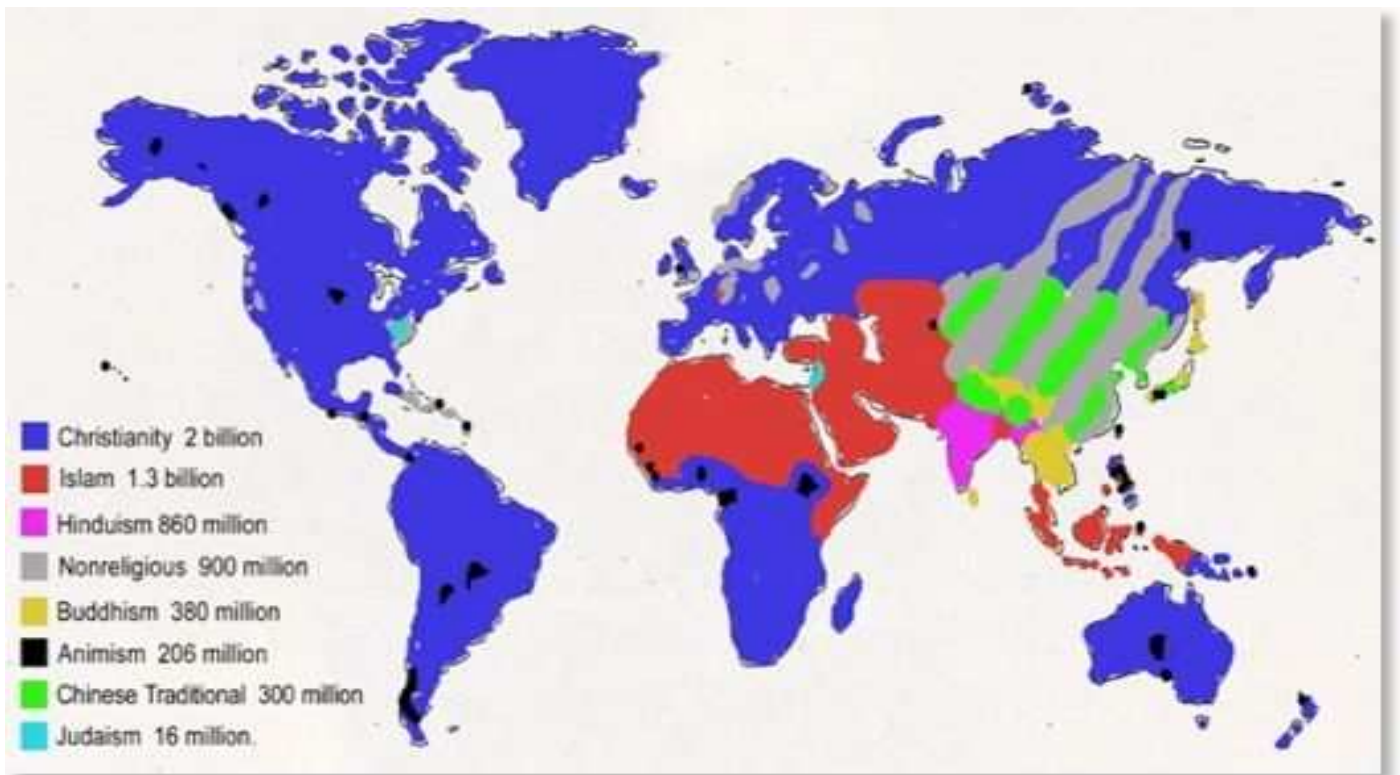
- Former Yugoslavia: Serbs, Croats, Bosnians, Albanians
- Burundi and Rwanda: Hutus and Tutsis
- United States, Switzerland: Multiple ethnicities united in one country
- Korea, Japan: Predominantly single ethnicity
- Cyprus: Greeks and Turks

Religion as a unifying force

- Hinduism
- Buddhism
- Judaism
- Christianity
- Islam



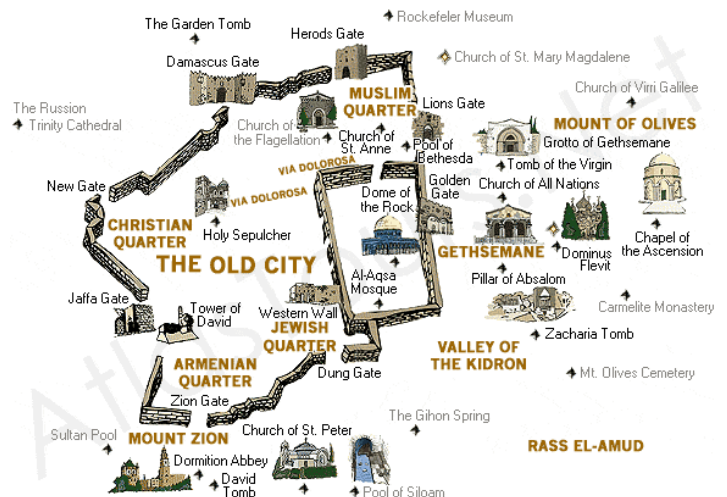
Symbols of major world religions



MAP OF WORLD RELIGIONS

Religious Conflicts

- Conflict between Hindus and Muslims in Pakistan and India
- Conflict between Catholics and Protestants in Northern Ireland
- Jews, Christians, and Muslims all claim Jerusalem as a religious heritage site
- Conflicts between Sunni and Shi'a Muslims



WG.4 *The student will locate and analyze physical, economic, and cultural characteristics of world regions: Latin America and the Caribbean, Europe, United States and Canada, North Africa and Southwest Asia, Sub-Saharan Africa, Russia and Central Asia, South Asia, Southeast Asia, East Asia, Australia and the Pacific Islands, and Antarctica.*

Latin America and the Caribbean

• Mexico and Central America

- Mexico
- Belize
- Guatemala
- El Salvador
- Honduras
- Nicaragua
- Costa Rica
- Panama

• South America

- Colombia
- Venezuela
- Guyana
- Suriname
- French Guiana
- Ecuador
- Peru
- Bolivia
- Brazil
- Paraguay
- Argentina
- Uruguay
- Chile

• Caribbean

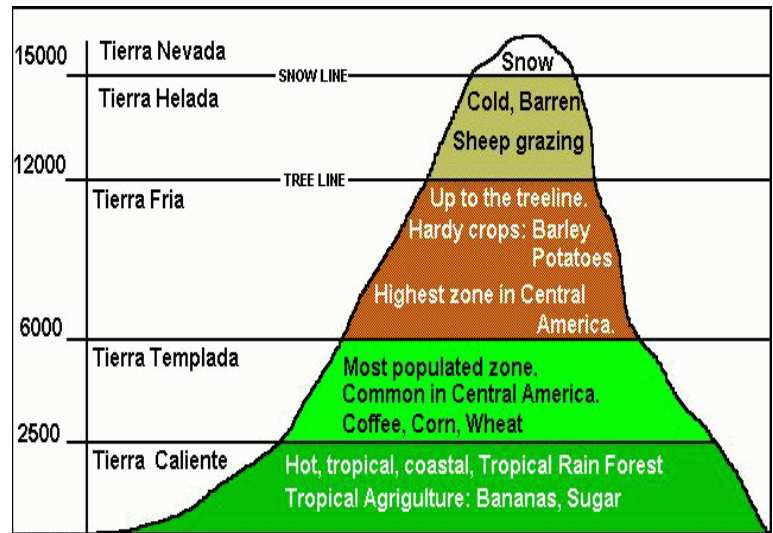
- Cuba
- Haiti
- Jamaica
- Dominican Republic
- Puerto Rico (U.S.)



**The Countries
of
Latin America**

PHYSICAL GEOGRAPHY

- Major mountain ranges: Andes, Sierra Madres
- Wildlife migration patterns (e.g., Monarch butterflies)
- Rain forests
- Coastal desert: Atacama
- Reversed seasons south of the equator
- Amazon River Basin
- Grasslands: *pampas*, *llanos*
- Tropical climates predominate.
- Volcanoes and earthquakes
- Archipelagos
- Vertical zonation (*tierra caliente*, *tierra templada*, *tierra fria*)



VERTICAL ZONATION

ECONOMIC GEOGRAPHY

- Diverse economies
- Subsistence farming
- Plantation agriculture
- Slash-and-burn agriculture
- Cash crops and food crops
- Haciendas
- Cattle ranges, gauchos
- Deforestation

- Destruction of rain forests
- Oil resources: Ecuador, Venezuela, and Mexico
- Heavy smog, (AIR) pollution: Mexico City
- Disparity of income distribution
- North American Free Trade Agreement (NAFTA): Mexico, Canada, United States.
- Diverse mineral resources (e.g., copper in Chile, iron ore in Venezuela and Brazil)

CULTURAL GEOGRAPHY

- Indian civilizations
- African traditions
- Influence of European colonization
- Predominance of Roman Catholic religion
- Rigid social structure

- Mestizos
- Location of settlements: coastal in South America
- Megacities, squatter settlements
- Rapid population growth
- Out-migration

Cultural heritage

- Music: African influences, calypso, steel drum bands, reggae
- Traditional dances
- Spanish, Portuguese languages

Cultural landscape

- Pyramids, cathedrals
- Haciendas, *ejidos* (communal land)
- Machu Picchu
- Tikal

Cities as centers of culture and trade

- Mexico City, Mexico
- Rio de Janeiro, Brazil
- Buenos Aires, Argentina
- Santiago, Chile



MACHU PICCHU
(Incan Indians- Peru)



TIKAL (Mayan Indians – Guatemala/Belize)

EUROPE

Location of countries, with particular emphasis on the countries listed below (selected on the basis of their per capita GDP, land size, and population)

- **GDP**

- Norway
- Switzerland
- Luxembourg

- **Land size**

- Ukraine
- France
- Spain

- **Population**

- Germany
- United Kingdom
- Italy
- France

PHYSICAL GEOGRAPHY

Part of large landmass called Eurasia

- **Peninsulas**

- Iberian
- Italian
- Scandinavian
- Jutland
- Balkan

- **Islands**

- Great Britain
- Ireland
- Sicily
- Iceland

- **Fjords**

- **Mountains**

- Alps
- Pyrenees

- **North European plain**

- **Rivers**

- Danube
- Rhine
- Seine
- Volga

- **Seas**

- Adriatic
- Aegean
- Mediterranean
- Baltic
- Black
- North

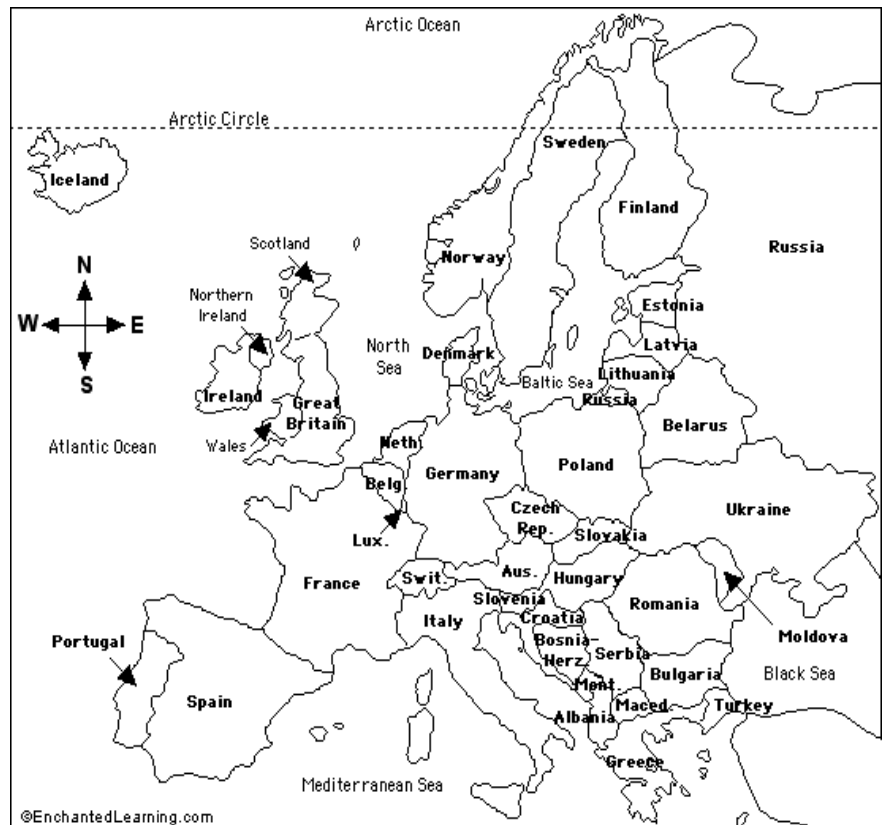
- **Oceans**

- Atlantic
- Arctic

- **Strait of Gibraltar**

- **Varied climate regions: Tundra to Mediterranean**

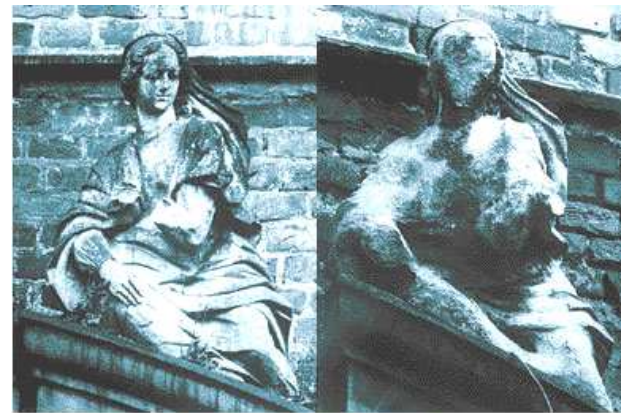
- **Effects of the North Atlantic Drift and prevailing westerlies on Europe's climates**



DANUBE RIVER – LONGEST RIVER IN EUROPE

ECONOMIC GEOGRAPHY

- Mountain regions: Tourism, recreation, mineral resources
- Areas threatened by air and water pollution
 - Forests (Black Forest)
 - Cities (Venice)
 - Rivers (Rhine, Danube, Seine)
- Development of industrial and transportation centers near mineral deposits (e.g., coal and iron ore)
 - Ruhr valley
 - Po valley
- Rivers and canals serving as major transportation links
- Oil reserves in the North Sea



How acid rain affects stonework.
The picture on the left was taken in 1908.
The picture on the right was taken in 1968



Map of oil reserves in the North Sea

- Well-educated work force: Industrial and technological societies, banking in Switzerland
 - Advanced farming techniques, high crop yields, fertile soils, black earth (*chernozem*)
 - Well-developed infrastructure
 - The Chunnel
 - Differences in Western and Eastern European industrial development due to differing economic systems in prior years
 - European Union
 - Trade important; interdependence
 - Large role of government in some economies (Sweden, Denmark)
 - Replacement of communism with capitalism in Eastern Europe
 - Reclaimed land: Polders in The Netherlands
- Demographics typical of developed economies
 - High per capita GDP
 - High life expectancy
 - Low population growth rate
 - Low infant mortality rate
 - Small percentage of population under age 15
 - High literacy rate

CULTURAL GEOGRAPHY

- Birthplace of Industrial Revolution
- Many ethnic groups with different languages, religions, customs
- Sporadic conflict among groups (wars, revolutions)
- Birthplace of western culture: Greece and Rome
- Spread of European culture to many other parts of the world (exploration, colonization, imperialism)
- Highly urbanized
- One of the world's most densely populated areas
- North Atlantic Treaty Organization (NATO)



POLDERS IN THE NETHERLANDS
(windmills and canals are part of the polders that remove water from land and make it suitable for farming)

FRANCE

- Notre Dame,



- Arc de Triomphe,



- Louvre,



Eiffel Tower



ITALY

- Colosseum,



- Leaning Tower of Pisa,



- St. Peter's Basilica



GREECE

- Parthenon



NETHERLANDS

- Windmills



ENGLAND

- Westminster Abbey,



- Big Ben



CITIES AS CENTERS OF CULTURE AND TRADE

- Warsaw, Poland
- Berlin, Germany
- Rome, Italy
- Madrid, Spain
- Paris, France
- London, England
- Athens, Greece
- Oslo, Norway
- Vienna, Austria

United States And Canada



- United States
- Canada

United States and Canada

- Abundant natural resources
- Continental Divide

Rivers

- Mississippi
- St. Lawrence
- Colorado
- Columbia
- Rio Grande

Other water features

- Gulf of Mexico
- Great Lakes
- Arctic Ocean
- Pacific Ocean
- Atlantic Ocean
- Hudson Bay

Land forms

- Appalachian Mountains
- Pacific Coastal Ranges
- Basin and Range
- Rocky Mountains
- Great Plains
- Interior lowlands
- Atlantic and Gulf Coastal Plains
- Canadian Shield
- Grand Canyon
- Columbia Plateau
- Colorado Plateau

- Varied climatic regions → Ranging from tundra in Alaska to tropical wet in Hawaii



Regional Map of U.S. & Canada

This map represents a general outline of Regions.

ECONOMIC GEOGRAPHY

- Major exporters of technology, information systems, and foodstuff
- Highly developed infrastructures
- Highly diversified economies
- Rich supply of mineral, energy, and forest resources
- North American Free Trade Agreement (NAFTA)
- Multinational corporations
- Center of world financial markets (New York Stock Exchange)
- Sustained economic growth
- Widening gap between rich and poor
- Export of U.S. culture via the global marketplace (e.g., McDonald's, Coca-Cola, music, blue jeans)



CULTURAL GEOGRAPHY

- Colonized by the Europeans
- Multicultural societies
- Increasingly diverse populations
- High literacy rate
- High standards of living
- Highly urbanized
- Canada's struggle to maintain a national identity
- Highly mobile populations
- World's longest unfortified border between the United States and Canada
- Democratic forms of government
- Arts that reflect the cultural heritage of multicultural societies
- North Atlantic Treaty Organization (NATO)

Cultural landscape

- U.S. Capitol
- Golden Gate Bridge
- Independence Hall
- St. Louis Gateway Arch
- Wheat fields
- Skyscrapers, shopping malls
- Bilingual signs
- Influence of the automobile (e.g., gas stations, motels, interstate highways, drive-up services)



Cities as centers of culture and trade

- Toronto, Canada
- Montreal, Canada
- Ottawa, Canada
- Québec, Canada
- Vancouver, British Columbia
- Washington, D.C.
- Chicago, Illinois
- New York City, New York
- Los Angeles, California
- Houston, Texas



North Africa and Southwest Asia (Middle East)

Location of countries, with particular emphasis on the countries listed below
(selected on the basis of their per capita GDP, land size, and population)

- GDP

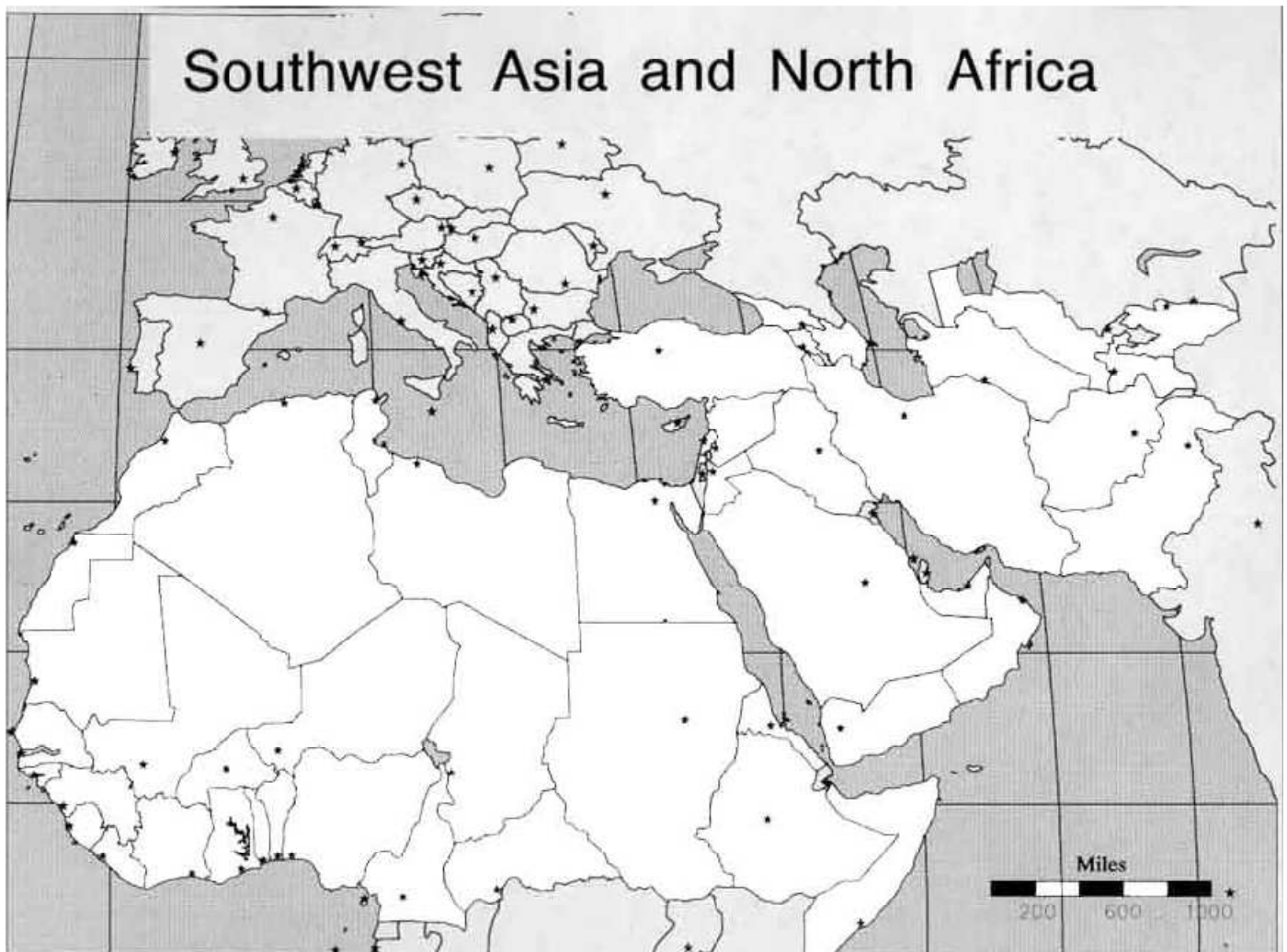
- Kuwait
- United Arab Emirates
- Qatar
- Israel

- Land size

- Algeria
- Saudi Arabia
- Libya

- Population

- Iran
- Turkey
- Egypt



PHYSICAL GEOGRAPHY

- Crossroads of Europe, Africa, and Asia
- Desert and semiarid climates: Sahara, *sahel*, steppes
- Mountains
 - Atlas
 - Taurus
 - Zagros
- Water features
 - Mediterranean Sea
 - Red Sea
 - Black Sea
 - Arabian Sea
 - Persian/Arabian Gulf
 - Strait of Hormuz
 - Bosphorus Strait
 - Dardanelles Strait
 - Nile River
 - Tigris River
 - Euphrates River
 - Jordan River
- Seasonal flooding, alluvial soils, delta regions, oases, wadis



WADI – dry riverbed in the desert that fills when it rains



Desert Oasis – place where water is near the surface and can be used for agriculture

ECONOMIC GEOGRAPHY

- Heavy reliance on primary economic activity - oil drilling, agriculture, pastoralism
- Major producer of world's oil
- Oil revenues: pays for infrastructure, education, etc.
- Water: The region's most precious resource
- Great variation in standards of living, ranging from very high to poverty-stricken
- Regional conflicts, political unrest that affects tourism
- Aswan High Dam: Positive and negative effects



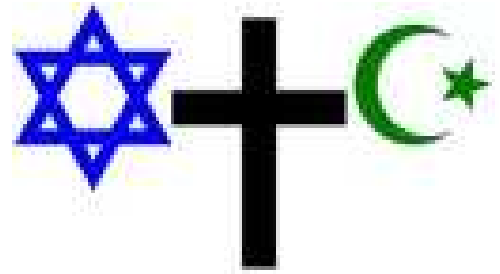
SATELLITE IMAGE OF THE SUEZ CANAL TAKEN FROM THE SOUTH (NASA)

- Suez Canal: Enhanced shipping routes in the region
- Guest workers
- Trade important to region from earliest time
- Wide range of per capita incomes and levels of development
- Contemporary trade routes (sea lanes)
- Organization of Petroleum Exporting Countries (OPEC)



CULTURAL GEOGRAPHY

- Rapid urbanization
- Modernization centered in urban areas while traditional life continues in rural areas
- Large percentage of population under age 15
- Population unevenly distributed
- Arab countries and Arabic language
- Non-Arab countries: Turkey, Iran, Israel
- Birthplace of three major monotheistic religions—Judaism, Christianity, and Islam
- Conflict over Palestine
- Nomadic lifestyles
- Art that reflects the diversity of religions (stained glass, geometric tiles, calligraphy, mosaics, prayer rugs)

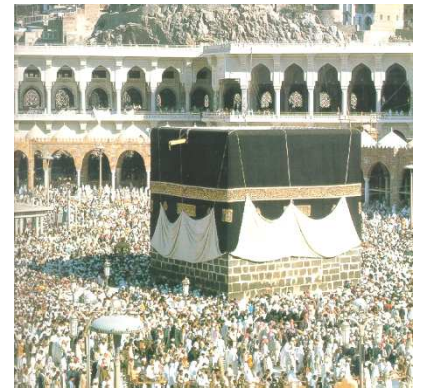


Cultural landscape

- Mosques, minarets
- Church of the Holy Sepulcher
- Hagia Sophia
- Bazaars (middle eastern market)
- Suqs (open air food market)
- Western Wall
- Dome of the Rock
- Kaaba
- Pyramids
- Oil rigs
- Walled cities



**Dome of the Rock
(Mosque in Jerusalem)**



**Kaaba
Mecca, Saudi Arabia**



Pyramids of Giza, Egypt



Hagia Sophia – Istanbul, Turkey

CITIES AS CENTERS OF CULTURE AND TRADE

- Baghdad, Iraq
- Cairo, Egypt
- Istanbul, Turkey
- Jerusalem, Israel
- Mecca, Saudi Arabia
- Tehran, Iran

ha ح	jim ج	theh ث	teh ت	beh ب	alif ا
sin س	zin ز	ra ر	dhal ذ	dal د	kha خ
'ain ع	DHa ظ	Ta ط	Dad ض	Sad ص	shin ش
mim م	lam ل	kaf ك	qaf ق	feh ف	ghain غ
<small>The Arabic alphabet is read from right to left. - Capital letters indicate velarization. - A dot below a letter indicates aspiration. - The arrow direction indicates how each letter is written.</small>					
yeh ي	waw و	heh ه	nun ن		

Arabic alphabet

SUB-SAHARAN AFRICA

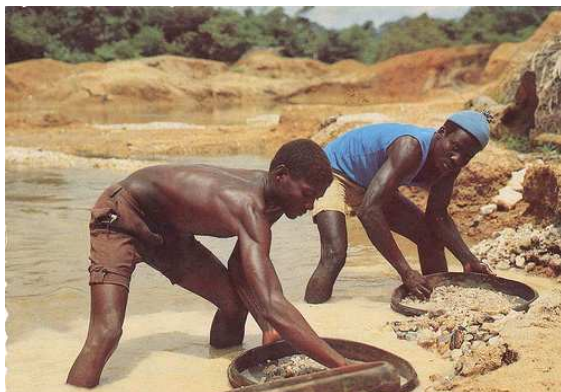
Location of countries, with particular emphasis on the countries listed below (selected on the basis of their per capita GDP, land size, and population)

- GDP
 - South Africa
 - Gabon
 - Botswana
- Land size
 - Democratic Republic of Congo
 - Sudan
 - Chad
 - Mozambique
 - Madagascar
- Population
 - Nigeria
 - Ethiopia
 - Democratic Republic of Congo
 - South Africa
 - Tanzania
 - Kenya



PHYSICAL GEOGRAPHY

- Continent composed of a huge plateau, escarpments
- River transportation impeded by waterfalls and rapids
- Location of equator through middle of region; similar climatic patterns north and south of the equator
- Smooth coastline; few harbors
- Large number of landlocked countries
- Storehouse of mineral wealth
- Limited fertility of rain forest soils
- Kalahari and Namib Deserts
- Bodies of water
 - Nile River
 - Zambezi River
 - Niger River
 - Congo River
 - Atlantic Ocean
 - Indian Ocean
 - Red Sea
 - Lake Victoria
 - Lake Tanganyika
- Nature preserves and national parks



Primary Economic Activity – diamond mining

- Major exporters of raw materials
- Wide range of per capita incomes
- Productivity that lags behind population growth
 - Desertification
- Demographics typical of developing economies
 - Low per capita GDP
 - Low life expectancy
 - High population growth rate
 - High infant mortality rate
 - Large percentage of population under age 15
 - Low literacy rate

ECONOMIC GEOGRAPHY

- Large percentage of population engaged in agriculture (primary activity)
 - Subsistence agriculture
 - Nomadic herding
 - Slash-and-burn agriculture
 - Plantation agriculture
 - Cash crops and food crops
- Poorly developed infrastructure
- Large number of landlocked countries
 - Substantial mineral wealth (diamonds, gold and other metals)



Desertification – the spreading of desert conditions into non-desert areas

CULTURAL GEOGRAPHY

- Uneven population distribution
- Many ethnic groups, languages, customs
- Large numbers of refugees
- Knowledge of history through oral tradition
- Country names related to historical empires: Mali, Ghana, Zimbabwe

Cultural heritage

- Masks
- Sculpture
- Dance
- Music
- Colorful dress
- Jewelry



African Tribal Mask

Cultural landscape

- Markets
- Churches
- Mosques, minarets
- Villages
- Modern city cores

Cities as centers of culture and trade

- Lagos, Nigeria
- Dakar, Senegal
- Johannesburg, South Africa
- Cape Town, South Africa



Colorful African Jewelry



Cape Town, South Africa – originally a supply station for ships sailing from Europe to Asia



Great Mosque – Timbuktu, Mali



South Africa was the home of the FIFA Men's Soccer World Cup in 2010. Hosting the World Cup brought over \$500 million to the South African economy.

Russia and Central Asia

Location of countries, with particular emphasis on the countries listed below (selected on the basis of their per capita GDP, land size, and population)

- GDP
 - Kazakhstan
 - Russia
 - Turkmenistan
- Land size
 - Russia
 - Kazakhstan
 - Turkmenistan
- Population
 - Russia
 - Kazakhstan
 - Uzbekistan

PHYSICAL GEOGRAPHY

- Vast land area: Spans two continents, Europe and Asia (covers 11 time zones)
- Vast areas of tundra, permafrost, taiga, and steppe
- Varied climatic regions
- **Chernozem** – rich black soil



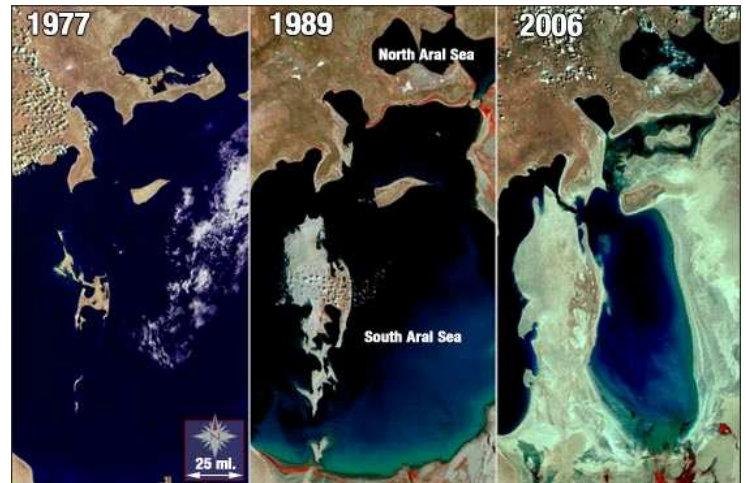
- Mountains (e.g., Ural Mountains, which divide Europe from Asia)
- Caucasus Mountains
- Siberia (the sleeping land), located east of the Urals
- Major oil, natural gas, and mineral resources
- Water features
 - Volga River
 - Ob River
 - Amur River
 - Lake Baikal
 - Caspian Sea
 - Aral Sea
 - Bering Strait
 - Pacific Ocean
 - Arctic Ocean
- Some rivers flow northward to the Arctic Ocean



Lake Baikal, Russia

ECONOMIC GEOGRAPHY

- Transition from communist to free market economy
- Farming and industry concentrated in the Fertile Triangle region, rich *chernozem* soils (wheat farming)
- Infrastructure: Trans-Siberian Railroad, systems of rivers, canals, and railroads
- Energy resources: Hydroelectric power, oil, natural gas
- Russian natural resources not fully developed due to climate, limited transportation links, and vastness of the country
- Foreign competition for investment in the region (oil pipelines)



Aral Sea – shrinking due to overuse for irrigation in Russia and Kazakhstan



Cotton gatherer – Kazakhstan (Central Asia)

- Widespread pollution
- Shrinking of the Aral Sea
- Political and economic difficulties after the breakup of the Soviet Union
- Cotton production in Central Asia

CULTURAL GEOGRAPHY

- Diverse ethnic groups, customs, and traditions (many people of Turkic and Mongol heritage)

Cultural heritage

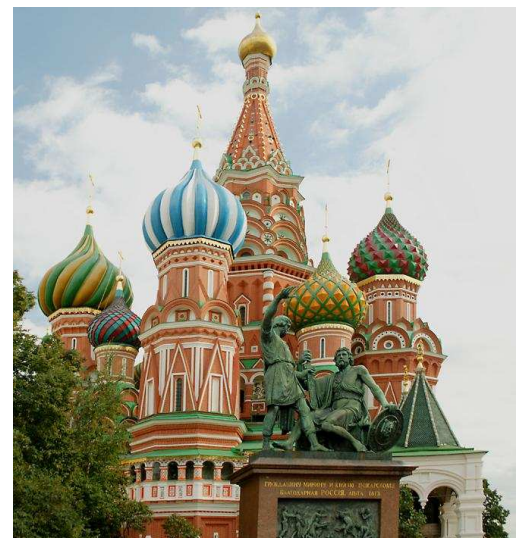
- Ballet
- Fabergé eggs
- Music
- Icons
- *Matryoshka* dolls
- Oriental carpets
- Samovars

Cultural landscape

- Russian Orthodox churches (e.g., St. Basil's Cathedral, Moscow)
- Red Square
- Kremlin
- Mosques, minarets
- Siberian villages
- Soviet-style apartment blocks



Matryoshka Dolls



St. Basil's Cathedral – Moscow, Russia



Russian Ballet

Cities as centers of culture and trade

- Moscow
- St. Petersburg
- Novosibirsk

South, Southeast, and East Asia

- South Asia

- Afghanistan
- Pakistan
- Nepal
- Bhutan
- Bangladesh
- India
- Sri Lanka

- Southeast Asia

- Philippines
- Indonesia
- Malaysia
- Thailand
- Cambodia
- Burma (Myanmar)
- Laos
- Vietnam
- Singapore
- Brunei

- East Asia

- Mongolia
- China (People's Republic of China)
- Japan
- Taiwan (Republic of China)
- North Korea
- South Korea





Mount Fuji – most important physical feature in Japan; very common in Japanese artwork



Rice Paddy – terraced farming in Indonesia

ECONOMIC GEOGRAPHY

- Varied economies in the region, ranging from subsistence/commercial agriculture to high-tech industrial manufacturing
- Participation in global markets



SUSHI!

- Newly industrialized countries: South Korea, Taiwan, Singapore
- Japan: Economic leader
- China in transition from a centrally planned economy
- Agricultural advancements and technology, enabling greater food production: “Green Revolution”
- Environmental degradation
- Deforestation
- Fishing
- ASEAN (Association of Southeast Asian Nations)
- Rice, tropical crops

PHYSICAL GEOGRAPHY

- Influence of mountains on population, settlements, movement, climate
 - Mountains
 - Himalayas
 - Western and Eastern Ghats
 - Mount Fuji
- Varied climatic regions ranging from tropical wet to humid continental
 - Natural hazards: Monsoons, typhoons, volcanic eruptions, earthquakes
- Influence of water (rivers, seas, and ocean currents) on agriculture, trade, and transportation
 - Bodies of water
 - Arabian Sea
 - Indian Ocean
 - Bay of Bengal
 - Ganges River
 - Indus River
 - Brahmaputra River
 - Pacific Ocean
 - Yangtze River (Chang Jiang)
 - Mekong River
 - Yellow River (Huang He)
 - Abundant arable land
 - Loess
 - Plateau of Tibet
 - Gobi Desert



CULTURAL GEOGRAPHY

- Areas of extremely dense and of sparse population
- Contrast between rural and urban areas
- Religious diversity: Hinduism, Islam, Buddhism, Christianity, Taoism, Shinto, Confucianism
- Respect for ancestors
- Religious conflicts (Hindu vs. Muslim)



Symbol of
Hinduism



Cultural heritage

- Silks
- Batik
- Wood and ivory carvings
- Ideograms, unique alphabets
- Jewels

Cultural landscape

- Taj Mahal
- Angkor Wat
- Great Wall of China
- Floating markets
- Mosques, minarets
- Pagodas
- Temples and shrines
- Terraced rice fields

Cities as centers of culture and trade

- Tokyo, Japan
- Beijing, China
- New Delhi, India



Taj Mahal - India



Great Wall of China



Buddhist Pagoda



Tokyo, Japan – One of the most
industrialized cities in Asia

Australia, Pacific Islands, and Antarctica

- Australia
- New Zealand
- Papua New Guinea
- Hawaiian archipelago (U.S.)



ANTARCTICA – SOUTH POLE

- Antarctica, the world's coldest, driest, windiest continent; icecap
- Pacific Islands: Volcanic, coral, or continental



Penguins in Antarctica

PHYSICAL GEOGRAPHY

- Wide range of vegetation, from tropical rain forests to desert scrub
- Australia, mostly desert
- The Great Dividing Range
- The Great Barrier Reef
- Australia's isolation, resulting in unique animal life



Great Barrier Reef – Northwest Coast of Australia

ECONOMIC GEOGRAPHY

- Air and water travel that bring goods and services to remote areas
- Dry areas of Australia well suited to cattle and sheep ranching
- Upset of environmental balance, caused by the introduction of non-native plants and animals
- Ranching, mining (primary activities)
- Communication and financial services (tertiary activities)

CULTURAL GEOGRAPHY

- Pacific Islands are sparsely populated.
- Most of Australia's population lives near the coasts.
- Traditional culture continues to shape life in the Pacific Islands.
- Lifestyles range from subsistence farming to modern city living.
- Cultures reflect the mix of European and indigenous cultures (e.g., Maori and aborigines).
- Antarctica has no permanent residents.

Cultural landscape

- Sydney Opera House
- Cattle and sheep stations (Australia)
- Research stations (Antarctica)
- Thatched-roof dwellings (Pacific Islands)

Cities as centers of culture and trade

- Canberra, A.C.T. (Australian Capital Territory)
- Sydney, Australia
- Auckland, New Zealand



Sydney Opera House – Sydney, Australia



Auckland, New Zealand



**Kangaroos live
in Australia**

WG.5 *The student will compare and contrast the distribution, growth rates, and characteristics of human population in terms of settlement patterns and the location of natural and capital resources.*

Factors that influence population distribution

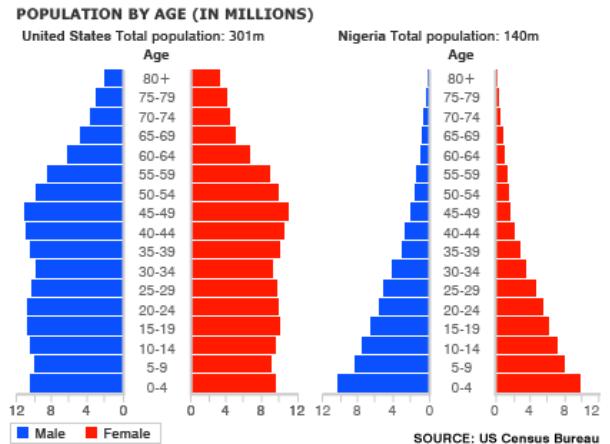
- Natural resources (e.g., oil, arable land, water)
- Climate (hot/cold; wet/dry)
- Economic development
- Government policy
- Rural/urban settlement patterns
- Capital resources (transportation, technology)
- Conflicts (refugees)

Characteristics of human populations

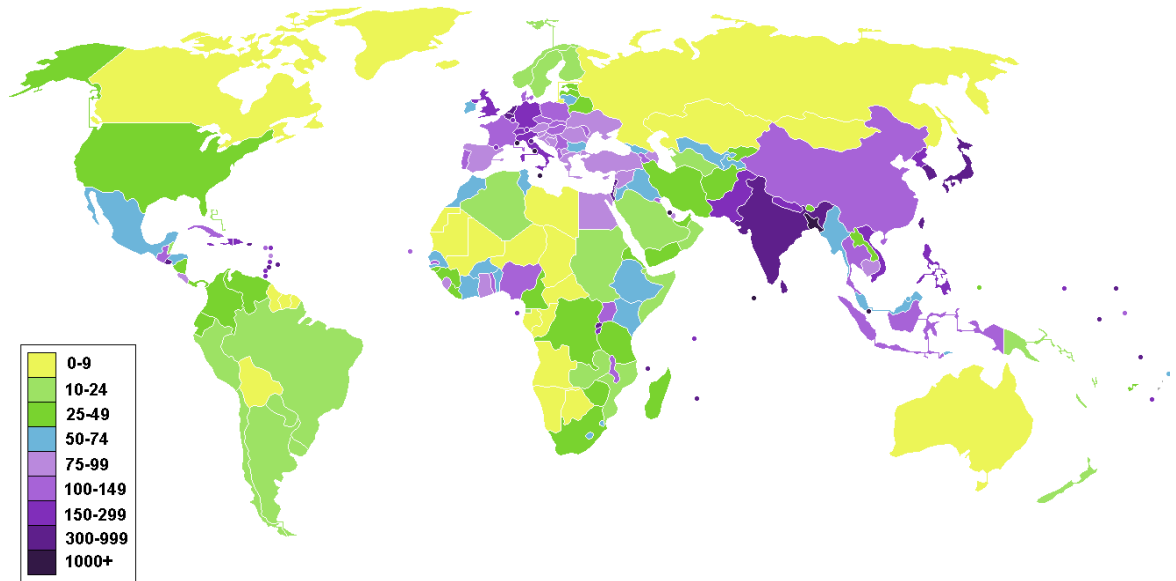
- Birth and death rates (war, disease, migration)
- Age distribution
- Male/female distribution
- Life expectancy
- Infant mortality rate
- Urban/rural distribution
- GDP
- Ethnicities
- Language
- Religion
- Education

Factors that influence population growth rates

- Modern medicine and hygiene
- Education
- Industrialization and urbanization
- Economic development
- Government policy
- Role of women in society



A population pyramid is a graph that shows the population of people in a country by gender and age



World Population Density Map
(the darker the country the higher the population density)

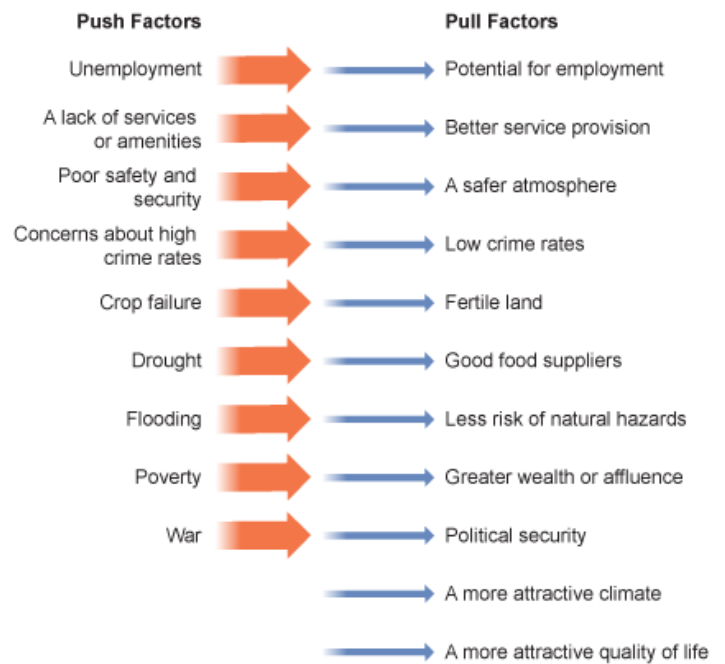
WG.6 *The student will analyze past and present trends in human migration and cultural interaction as they are influenced by social, economic, political, and environmental factors.*

PUSH FACTORS

- Overpopulation
- Religious persecution
- Lack of job opportunities
- Agricultural decline
- Conflict
- Political persecution
- Natural hazards (e.g., droughts, floods, famines, volcanic eruptions)
- Limits on personal freedom
- Environmental degradation

PULL FACTORS

- Religion opportunity
- Land availability
- Political freedom
- Ethnic ties
- Arable land



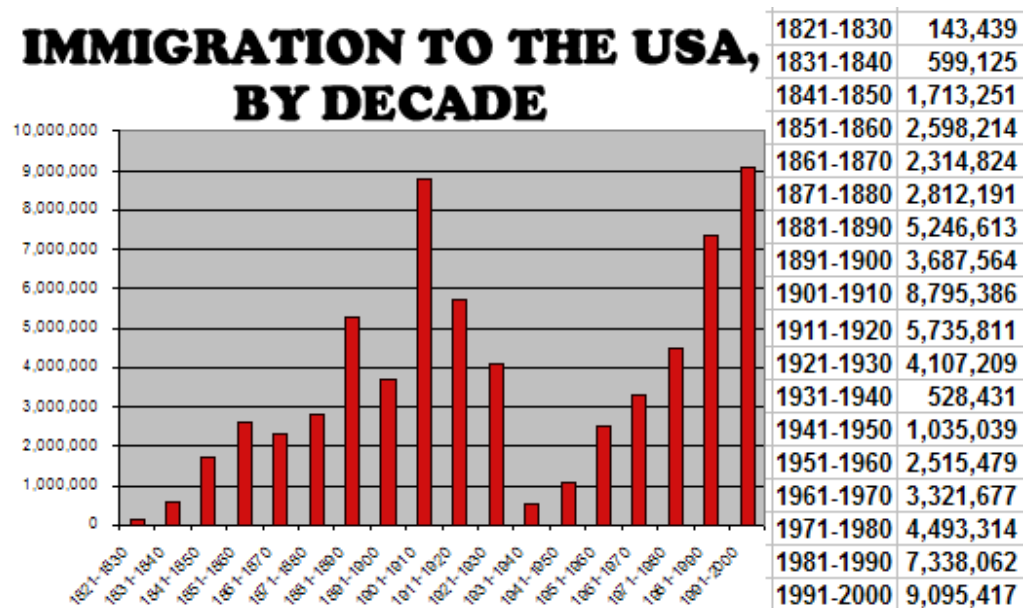
Impact of migrations on regions

- Language
- Religion and religious freedom
- Customs and traditions
- Cultural landscape

Evidence of cultural interaction

- Diffusion of U.S. culture to other regions
- Popularization of other cultural traditions in the U.S.

IMMIGRATION TO THE USA, BY DECADE



WILLisms.com



Everyone loves Mexican food, right?

WG.7 *The student will identify types of natural, human, and capital resources and explain their significance by*

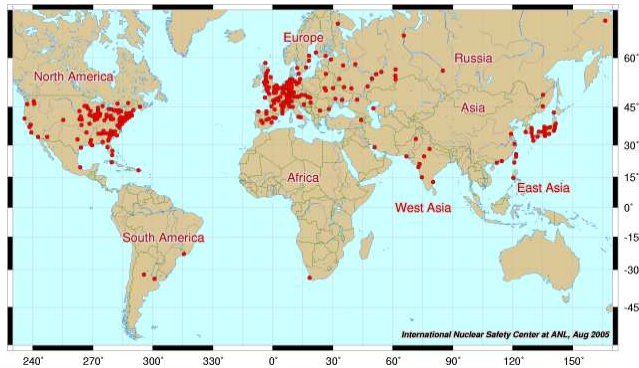
- showing their influence on patterns of economic activity and land use;*
- evaluating perspectives and consequences regarding the use of resources.*

Changes in use of energy resources and technology over time

- Wood (deforestation)
- Coal (pollution, mining problems, competition with oil and gas)
- Petroleum (transportation, environmental considerations)
- Nuclear (contamination, waste)
- Solar, wind (cost, aesthetics)



Deforestation in the Amazon



Nuclear Power plants around the world (red dots)



Solar and Wind Energy is a clean alternative

Natural resources

- Renewable: Soil, water, forests
- Nonrenewable: Fossil fuels (oil, coal, natural gas) and metals (gold, iron, copper, bauxite)

Human resources

- Level of education
- Skilled and unskilled laborers
- Entrepreneurial and managerial abilities



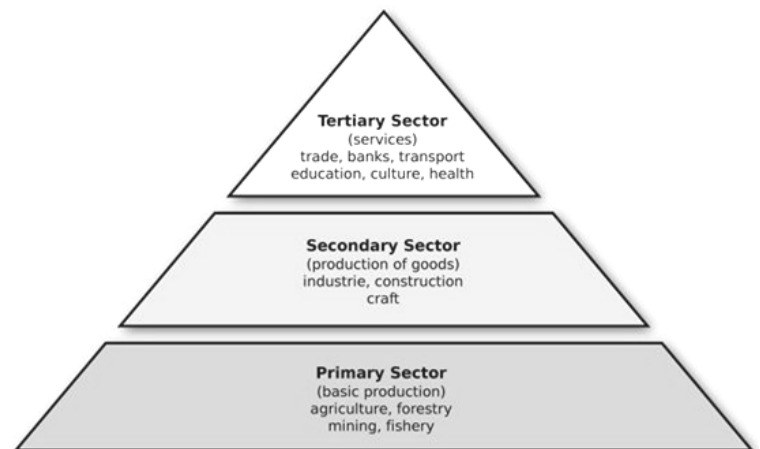
Coal is a NON-RENEWABLE resource

Capital resources

- Availability of money for investment
- Level of infrastructure
- Availability and use of tools, machines, and technologies

Levels of economic activity

- **Primary:** Dealing directly with resources (e.g., fishing, farming, forestry, mining)
- **Secondary:** Manufacturing and processing (e.g., steel mills, automobile assembly, sawmills)
- **Tertiary:** Services (e.g., transportation, retail trade, information technology services)



Effects of unequal distribution of resources

- Interdependence of nations, trading in goods, services, and capital resources
- Uneven economic development
- Energy producers and consumers
- Imperialism
- Conflict over control of resources

Patterns of land use

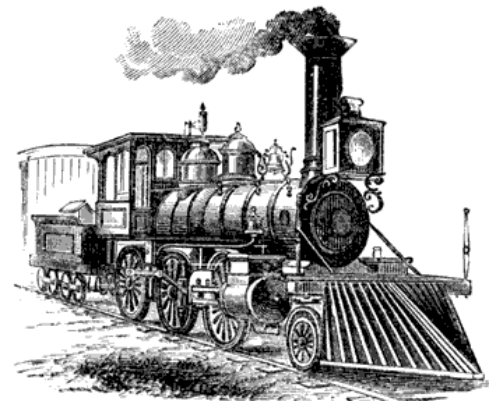
- Economic activities that require extensive areas of land (e.g., agriculture) vs. those that require a limited areas (e.g., manufacturing)
- Land uses that are compatible with each other (open spaces and residential) vs. land uses that are not compatible (e.g., landfills and residential)

Social and economic priorities that influence a culture's perspective on resources

- Economic development priorities
- Environmental conservation priorities
- Priorities of indigenous minorities

Examples of technologies that have created demand for particular resources

- Steam engine: demand for coal
- Internal combustion engine (cars and trucks): demand for gasoline (oil)
- Computer chips: demand for skilled labor



The invention of the STEAM ENGINE increased the demand for coal for power.



Costs

- Resource depletion
- Environmental degradation
- Health problems

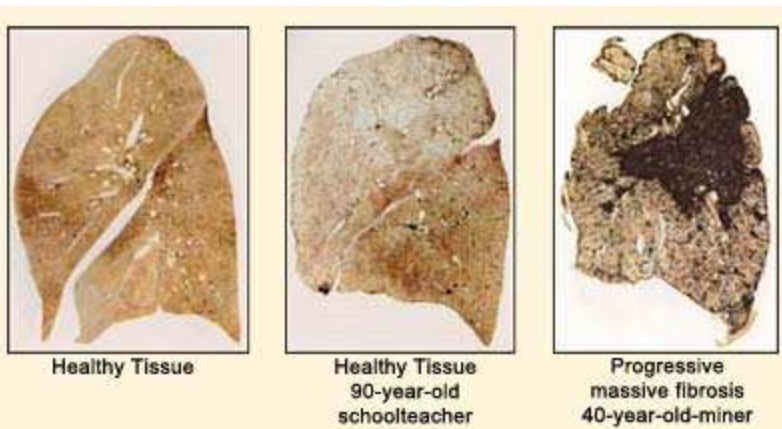
Benefits

- Production of goods and services
- Employment opportunities
- Development of technologies

The internal combustion engine replaced coal fueled engines with petroleum fueled engines.



The invention of computers increased the demand for skilled laborers – people who were trained to work with computers.



This diagram shows that coal mining can cause serious health problems.

WG.8 *The student will distinguish between developed and developing countries and relate the level of economic development to the standard of living and quality of life.*

Differences between developed and developing nations

- Access to natural resources
- Access to capital resources (investment in technology and infrastructure)
- Number and skills of human resources
- Levels of economic development
- Standards of living and quality of life
- Relationships between economic development and quality of life



Low standard of living (above)
vs.
High standard of living (below)

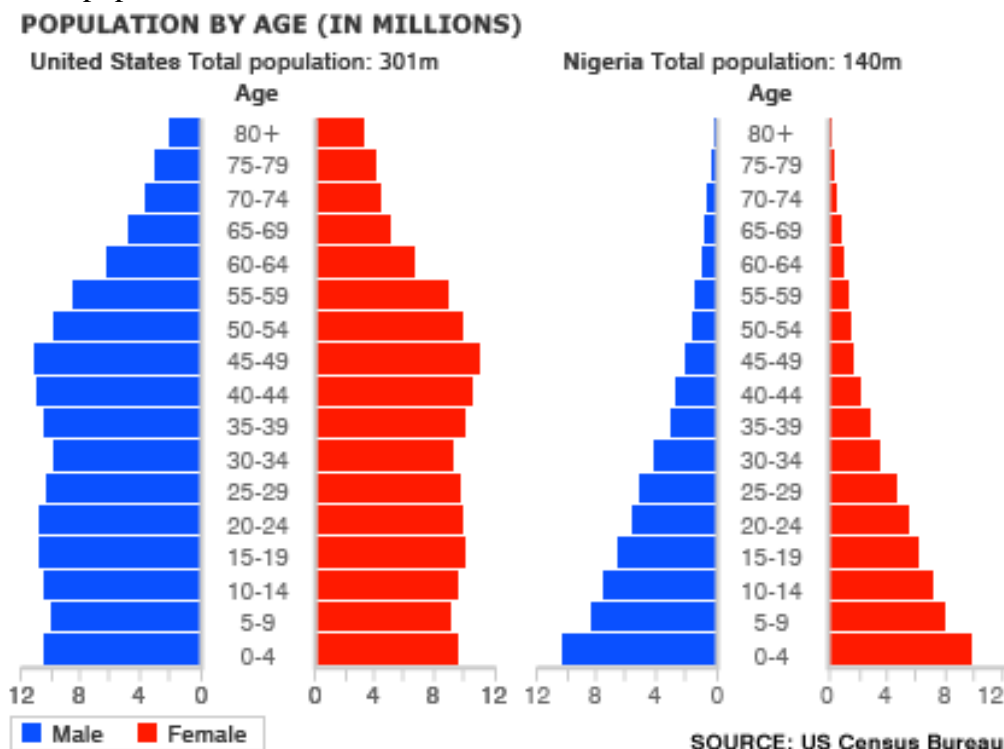
Indicators of economic development

- Urban-rural ratio
- Labor force characteristics (primary, secondary, tertiary sectors)
- GDP per capita
- Educational achievement



Indicators of standards of living and quality of life

- Population growth rate (natural increase)
- Population age distribution
- Literacy rate
- Life expectancy
- Infant mortality rate
- Percentage of urban population

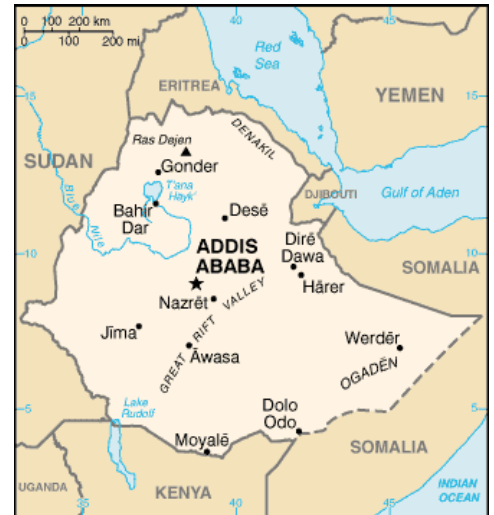


Population Pyramids (above) show the growth of a population. Countries with HIGH standards of living are more likely to have slow or negative growth (graph on left), while countries with LOW standards of living are more likely to have rapid population growth (graph on right).

- WG.9** *The student will analyze the global patterns and networks of economic interdependence by*
- identifying factors, including comparative advantage, that influence economic activities and trade;*
 - describing ways that economic and social interactions have changed over time;*
 - mapping, describing, and evaluating the formation of economic unions.*

Factors that influence economic activity

- Access to human, natural, and capital resources, such as
 - skills of the work force
 - natural resources
 - new technologies
 - transportation and communication networks
 - investment capital
- Location and ability to exchange goods
 - Landlocked countries
 - Coastal and island countries
 - Proximity to shipping lanes
 - Access to communication networks
- Membership in political and economic alliances that provide access to markets (e.g., European Union [EU], North American Free Trade Agreement [NAFTA])



Ethiopia is a landlocked country, which means it has no direct access to ocean water. Most landlocked countries are POOR.

Terms to know

- comparative advantage: The ability of countries to produce goods and services at lower relative costs than other countries, resulting in exports of goods and services.

Effects of unequal distribution of resources

- Specialization in goods and services that a country can market for profit
- Exchange of goods and services (exporting what a country can market for profit; importing what a country cannot produce profitably)

Some countries' use of resources

- Japan: Highly industrialized nation despite limited natural resources



Japan has limited natural resources, but is a major automobile manufacturer.

- Russia: Numerous resources, many of which are not economically profitable to develop
- United States: Diversified economy, abundant natural resources, specialized industries
- Côte d'Ivoire: Limited natural resources, cash crops exchanged for manufactured goods
- Switzerland: Limited natural resources, production of services on a global scale

Reasons why countries engage in trade

- To import goods and services that they need
- To export goods and services that they can market for profit

Effects of comparative advantage on international trade

- Enables nations to produce goods and services that they can market for profit
- Influences development of industries (e.g., steel, aircraft, automobile, clothing)
- Supports specialization and efficient use of human resources

Changes over time

- Industrial labor systems (e.g., cottage industry, factory, office, telecommunications)
- Migration from rural to urban areas
- Industrialized countries export labor-intensive work to developing nations
- Growth of trade alliances
- Growth of service (tertiary) industries
- Growth of financial services networks and international banks
- Internationalization of product assembly (e.g., vehicles, electronic equipment)
- Technology that allows instant communication among people in different countries
- Modern transportation networks that allow rapid and efficient exchange of goods and materials (e.g., Federal Express, United Parcel Service, U. S. Postal Service)
- Widespread marketing of products (e.g., Fuji film, Nike, United Colors of Benetton)



Nike Basketball billboard in Asia.

Economic interdependence can be depicted through trade, resource, or transportation maps.

Examples of economic unions

- EU: European Union
- NAFTA: North American Free Trade Agreement
- ASEAN: Association of Southeast Asian Nations
- OPEC: Organization of Petroleum Exporting Countries



Almost all members of the European Union use the same currency.

Advantages of economic unions

- More efficient industries
- Access to larger markets
- Access to natural, human, and capital resources without restrictions
- Greater influence on world market

Disadvantages of economic unions

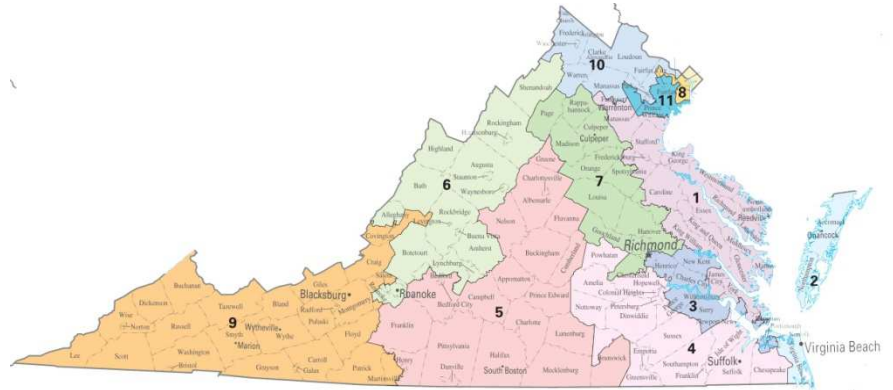
- Closing of some industries
- Concentration of some industries in certain countries, leaving peripheral areas behind
- Agribusiness replacing family farms
- Difficulty in agreeing on common economic policies

WG.10 *The student will analyze how the forces of conflict and cooperation affect the division and control of the Earth's surface by*

- explaining and analyzing reasons for the creation of different political divisions;*
- analyzing ways cooperation among political jurisdictions is used to solve problems and settle disputes.*

Examples of political divisions

- Neighborhoods
- Election districts
- School districts
- Regional districts (e.g., waste disposal, conservation districts, planning districts, zip code zones)
- Cities
- Counties
- States



Each state is divided up into smaller areas for political elections

Reasons for political divisions

- Desire for government closer to home
- Need to solve local problems
- Need to administer resources more efficiently

Reasons for conflict

- Boundary disputes
- Cultural differences
- Economic differences
- Competition for scarce resources
- Political advantages (e.g., gerrymandering)

Reasons for cooperation

- Natural disasters
- Economic advantages (attract new businesses)
- Cultural similarities, ethnic neighborhoods
- Addressing regional issues (e.g., waste management, magnet schools, transportation)



The countries of India and Pakistan are in conflict over the region of Kashmir in the north.



HRT is an example of a transportation system that is used by neighboring cities and counties.

Examples of political divisions

- Countries
- Alliances: economic and political
 - North Atlantic Treaty Organization (NATO)
 - European Union (EU)
 - Organization of Petroleum Exporting Countries (OPEC)
 - North American Free Trade Agreement (NAFTA)
 - United Nations
 - Organization of American States (OAS)
 - League of Arab States
- Association of Southeast Asian Nations (ASEAN)
- African Union (AU)

Reasons for political divisions

- Differences in culture, language, religion
- Retention of historical boundaries
- Imperial conquest and control
- Economic similarities and differences

Reasons for conflict

- Boundary and territorial disputes (Syria-Israel, Western Sahara-Morocco, China-Taiwan, India-Pakistan)
- Cultural differences (language, religion)
 - Indonesia
 - Canada (Québec)
 - Sudan
- Economic differences (fertile land, access to fresh water, access to coast, fishing rights, natural resources, different economic philosophies)
- Ethnic differences
 - Balkans
 - Cyprus
 - Kashmir
- Nationalism



People in Quebec speak French, while most Canadians speak English.

Examples of cooperation

- Humanitarian initiatives (e.g., Red Cross and Red Crescent)
- Economic alliances (e.g., Law of Sea, China and United States, multinational corporations, North American Free Trade Agreement [NAFTA], Organization of Petroleum Exporting Countries [OPEC])
- Cultural alliances (e.g., Francophone world, Commonwealth of Nations)
- Military alliances (e.g., North Atlantic Treaty Organization [NATO])
- Problem-solving alliances (e.g., Antarctica Treaty, United Nations [UN] peacekeepers)



Map of ethnic groups in the Balkan Region of Europe



- Programs to promote international understanding (e.g., Peace Corps)
- Alliances for environmental preservation
- Alliances for foreign aid

The ICRC (Red Cross/Red Crescent) works worldwide to provide humanitarian help for people affected by conflict and armed violence and to promote the laws that protect victims of war.

WG.11 *The student will analyze the patterns of urban development by*

- applying the concepts of site and situation to major cities in each region;*
- explaining how the functions of towns and cities have changed over time;*
- describing the unique influence of urban areas and some challenges they face.*

Terms to know

- **site:** the actual location of a city
- **situation:** relative location, e.g., the location of a city with respect to other geographic features, regions, resources, and transport routes

Examples of SITE (local characteristics)

- **Harbor sites:** cities that developed on natural harbors - New York City; Alexandria, Egypt; Istanbul, Turkey
- **Island sites:** cities that began on an island – Paris, France (originally located on an island in the Seine River), Hong Kong, Singapore
- **Fall line sites:** cities that developed at a fall line; line where rivers become un-navigable - Richmond, Virginia
- **Confluence sites:** cities that developed at the point where two rivers converge to make a larger river - Khartoum, Sudan; Pittsburgh, Pennsylvania
- **Hilltop sites:** cities that developed at the top of a hill or mountain - Rome, Athens, Jerusalem
- **Oasis sites:** cities that developed around a desert oasis - Damascus, Syria; Siwa, Egypt
- **Sites where rivers narrow:** London, Québec City

Examples of SITUATION (regional/global connections)

- *Baghdad, Iraq:* Command of land between the Tigris and Euphrates rivers
- *Istanbul, Turkey:* Command of straits and land bridge to Europe
- *Mecca, Saudi Arabia; Varanasi (Benares), India:* Focal point of pilgrimage
- *Samarkand, Uzbekistan; Xi'an, China; Timbuktu, Mali; Singapore:* Cities that grew up around trade routes (the Silk Road, Trans-Saharan trade, maritime trade)
- *Cape Town, South Africa:* Supply station for ships
- *Omaha, Nebraska; Sacramento, California:* Cities that grew up along the U.S. Transcontinental Railroad
- *Novosibirsk, Vladivostok, Russia:* Cities that grew up along the Trans-Siberian Railroad



Pittsburgh was built at the confluence of two rivers



Walls were built around the city of Avila, Spain for security and defense against enemies.

Functions of towns and cities

- Security, defense
- Religious centers
- Trade centers (local and long distance)
- Government administration
- Manufacturing centers
- Service centers

Examples of cities whose functions have changed over time

- Rio de Janeiro: Move of Brazil's capital from Rio de Janeiro to Brasilia
- Pittsburgh, Pennsylvania: Early function connected to defense, then became steel manufacturing center, later shifted to diverse services (financial, light manufacturing)
- New York City: Changes in trade patterns—coastal and transatlantic trade, trade from Great Lakes via Erie Canal, worldwide trade and finances
- Mining towns, “ghost” towns: Resource depletion, changes in the environment

Influences of urban areas on their regions and countries

- Nation-building (monuments, symbols)
- Transportation/communication hubs
- Magnets for migration
- Seed beds of new ideas and technologies
- Diversity, leading to creativity in the arts
- Universities, educational opportunities
- Corporate headquarters/regional offices
- Media centers (news, entertainment)

Problems associated with growth of urban areas

- Transportation problems emerge, especially as automobile travel increases.
- Rich and poor neighborhoods exist in different areas isolated from one another.
- Providing essential services (fresh water, sewage disposal, electricity, schools, clinics) becomes a problem (e.g., cities in Latin America, Africa, and Asia).
- Air, water, and noise pollution increase.
- Sprawl results in conversion of agricultural land to urban uses, especially in North America.
- In developing countries, major cities are connected more to regions outside the country than to regions within the country.



The Statue of Liberty is a major symbol of the United States.

WG.12 *The student will apply geography to interpret the past, understand the present, and plan for the future by*

a) using geographic knowledge, skills, and perspectives to analyze problems and make decisions;

b) relating current events to the physical and human characteristics of places and regions.

Practical applications of geography at local and regional levels

- Air- and water-quality monitoring and management
- Recycling programs
- Land-use and transportation planning
- Selection of locations for residential and commercial development

Geographic relationships

- Physical characteristics that influence current events:
 - Natural hazards (e.g, flooding, earthquakes, volcanoes, drought)
 - Climate, vegetation
- Human characteristics that influence current events:
 - Population distribution
 - Geographic patterns of ethnic diversity
 - A sense of place (emotional attachment to specific locations)
 - Geographic patterns of trade and interdependence (e.g., oil)
 - Geographic patterns of wealth and poverty (developed and developing nations)