

6th and 7th Grade Social Studies Geography Curriculum
PART I

I. Five Themes of Geography

A. Location

1. Cardinal Directions
 - a) North
 - b) South
 - c) East
 - d) West
2. Intermediate Directions
 - a) Northwest
 - b) Southwest
 - c) Northeast
 - d) Southeast
3. Latitude
 - a) Definition: the distance north or south of the Equator, measured in degrees
 - b) East-West circles around the globe
 - c) Equator: the line of latitude around the middle of the globe at 0°
 - i. Degrees: units that measure angles
 - d) Parallels: another name for lines of latitude
 - i. Run east and west
 - ii. Run parallel to one another
 - iii. They never cross
4. Longitude
 - a) Definition: the distance east or west of the Prime Meridian, measured in degrees
 - b) Run north and south
 - c) Prime Meridian: the line of longitude that marks 0° of longitude
 - d) Meridians: another name for lines of longitude
 - i. Run north and south
 - ii. Run from the North Pole to the South Pole
5. The Global Grid
 - a) Lines of latitude and longitude form the global grid.
 - b) Used to find absolute location
 - i. absolute location: exact address of any place on earth
6. Relative Location
 - a) The location of a place relative to another place
7. Hemispheres
 - a) Definition: each half of the Earth divided by the Equator and the Prime Meridian
 - b) Northern and Southern Hemispheres
 - i. Equator divides the earth into the northern and southern hemisphere
 - c) Eastern and Western Hemispheres
 - i. Prime Meridian divides Earth into eastern and western hemispheres

B. Regions

1. Used by geographers to group places that have something in common.
2. Definition: an area that has a unifying human or physical feature
 - a) Population
 - b) History
 - c) Climate
 - d) Landforms

C. Place

1. Definition: Human and physical features at a specific location.
 - a) Population
 - b) History
 - c) Climate
 - d) Landforms

D. Movement

1. Definition: The theme of geography that helps to explain how people, goods, and ideas get from one place to another.
2. Aids in understanding of changes
 - a) Cultural
 - b) Political
 - c) Economic
 - d) Religious
 - e) Technological
 - f) Social

E. Human-Environment Interaction

1. Definition: the theme of geography that explores how people affect their environment and how their environment affects them.
 - a) Environment: the natural surroundings of a people

II. Geographer's Tools

A. Globes and Maps

1. Globe: a model with the same round shape as the earth
2. Problems with Globes
 - a) Scale: relative size
 - b) A globe cannot be complete enough to be useful for finding directions and at the same time small enough to be convenient for everyday use.

B. Maps and Mapping

1. Flat Maps
2. Problem with Flat Maps
 - a) Earth is round.

- b) Map is flat.
- c) Distortion: loss of accuracy

3. Cartography

- a) Mapmakers (cartographers) rely on the following to limit distortion
 - i. ground surveys: measurements made on the ground
 - ii. aerial photographs
 - iii. satellite images

C. Aerial Photographs and Satellite Images

1. Aerial Photographs
 - a) Photographs of Earth's surface taken from the air.
2. Satellite Images
 - a) Pictures of Earth's surface taken from a satellite in orbit.
3. Importance of aerial photographs and satellite images
 - a) Provide current information about Earth's surface
 - b) Very detailed
4. Drawbacks of aerial photographs and satellite images
 - a) Not useful in finding objects that are hidden (i.e. underground transit lines)
 - b) Not useful in finding features that may be covered by vegetation
 - c) Give a distorted view of Earth's surface

D. Geographic Information Systems (GIS)

1. A computer-based system that links information to locations
2. Users
 - a) Geographers / Cartographers: produce maps
 - b) Governments
 - i. Military
 - c) Business

E. Projection

1. Mercator Projections
 - a) Gerardus Mercator
 - i. Mapmaker who created a flat map to help sailors navigate around the globe
 - ii. Navigate: plan journeys
 - iii. Projection: method of mapping Earth on a flat surface
 - b) Lines of Latitude and Longitude
 - i. Makes areas near the poles look bigger than they are because on a globe the lines of longitude meet at the poles
 - ii. To keep lines of longitude straight up and down, the spaces between them north and south of the Equator
 - iii. Land at/near Equator is relatively accurate.
 - iv. Land near the poles became much bigger.
 - c) Sailors and the Mercator Projection

- i. It showed directions accurately
 - ii. Sizes and distances were distorted
 - d) Conformal Map
 - i. Shows correct shapes but not true distances or sizes
- 2. Equal-Area Projections
 - a) Shows the correct size of land masses, but their shapes are altered
 - b) Lines may be forced into curves to fit on the map's flat surface
- 3. The Robinson Projection
 - a) Arthur Robinson and his Projection
 - i. Cartographer
 - ii. Believed by many geographers to be the best world map available.
 - b) Shows most distances, sizes, and shapes quite accurately
 - c) Drawbacks of a Robinson Projection
 - i. Distortions, especially in areas around the edges of the map.
- 4. Other Projections
 - a) Specific Purposes
 - i. Useful for showing small areas

F. Reading a Map

1. Most maps have the same basic parts
2. Knowing how to use these parts, helps to read and understand any kind of map

G. Parts of a Map

1. Compass Rose
 - a) A diagram of a compass showing direction
2. Scale Bar
 - a) Shows how distances on a map compare to actual distances on the land.
 - b) Scales vary depending upon the map.
3. Key or Legend
 - a) The part of the map that explains the symbols and shading on the map.
 - b) Symbols
 - c) Colors
 - i. Elevation
 - ii. Physical and human features of a region.

PART II: Earth's Physical Geography

I. Earth and Sun

A. Earth

1. Part of the Milky Way Galaxy
 - a) Galaxy: family of stars
 - i. Includes the Earth, the sun, the planets, and the stars
 - b) Solar System: the earth, the other planets, and other objects that orbit the sun.

B. Sun

1. Approximately 93 million miles away from the Earth
2. Provides the Earth with heat and light

C. The Earth and the Sun

1. Orbit
 - a) Definition: the path one body makes as it circles around another
 - b) Earth's orbits is "nearly circular" or elliptical.
 - c) Earth's orbit is 365 $\frac{1}{4}$ days
2. Revolution
 - a) Definition: circular motion

D. Day and Nights

1. Earth spins in place - on its axis- as it circles the sun.
 - a) Axis
 - i. Definition: an imaginary line running through Earth between the North and South poles.
 - b) Rotation
 - i. Definition: complete turn
 - ii. Earth's rotation takes about 24 hours
 - iii. Earth rotates towards the east
2. Night
 - a) Earth Rotates
 - b) Night on the side away from the sun
3. Day
 - a) Earth Rotates
 - b) Day on the side that faces the sun
4. Sunrise, Sunset
 - a) Sunrise: as the Earth turns towards the sun
 - b) Sunset: as the Earth turns away from the sun

E. Time Zones

1. Earth rotates towards the east
 - a) Day starts earlier in the east
2. Time Difference
 - a) Is approximately a few seconds per hour
3. Standard Time Zones
 - a) Government divided the world into zones
 - b) Times in neighboring zones are one hour apart.
 - c) Nonstandard Time Zones: less than a full hour away from their neighbors

F. Seasons

1. Why seasons occur
 - a) The revolution of the tilted planet earth
2. Summer

- a) Summer Solstice
 - i. About June 21st
 - ii. Sun is directly over the Tropic of Cancer
 - iii. North of the Arctic Circle, the sun never sets, continuous daylight
Northern hemisphere is tilted toward the sun.
- 3. Fall
 - a) About September 23rd
 - b) The Earth moves through its orbit
 - c) Northern hemisphere is tilted farther away from the sun
 - d) Less direct sunlight
- 4. Winter
 - a) Winter Solstice
 - i. About December 21st
 - ii. Sun is directly over the Tropic of Capricorn
 - iii. The area north of the Arctic Circle is in constant darkness
 - iv. Northern hemisphere is tilted farthest away from the sun.
 - b) Days are short
 - c) Sun's rays reach Earth at steep angles
 - d) Cold weather
- 5. Spring
 - a) About March 21st
 - i. Days and nights are nearly equal in length
 - b) The Earth moves through its orbit
 - c) Northern hemisphere is tilted towards the sun
 - i. The Earth's axis tilts "sideways"
 - ii. Sun is directly over the Equator
 - iii. Warming trend

G. Latitudes

- 1. The Low Latitudes: The Tropics
 - a) The areas between the Tropic of Cancer and the Tropic of Capricorn
 - i. Fairly direct sunlight
 - ii. Hot weather all year
- 2. High Latitudes
 - a) Polar Zones
 - b) The areas above the Arctic Circle and below the Antarctic Circle
 - i. Many long hours of sunlight during the sunlight
 - ii. Sun is never directly overhead
 - iii. Cool or very cold all year
- 3. Middle Latitudes
 - a) Temperate Zones
 - b) The areas between the high and low latitudes
 - i. Fairly direct sunlight in the summer
 - ii. Very indirect sunlight in the winter
 - iii. Marked seasons
 - iv. Hot summer

- v. Cold winter
- vi. A moderate spring and fall

II. Forces Shaping Earth

A. Composition of the Earth

1. Earth's Layers
 - a) Core: a sphere of very hot metal at the center of the Earth
 - i. Approximately 5,000° F
 - ii. Mostly metal
 - iii. Inner core is solid due to the great pressure of the crust and the mantle
 - iv. Inner and outer core extend about 2,200 miles from the Earth's surface
 - v. Liquid core: mostly molten (liquefied) metal
 - b) Mantle: thick, hot, rocky layer around the core
 - i. Rocky mantle: about 1,800 miles thick
 - ii. Temperature of more than 3,300°F
 - c) Crust: a thin layer of rocks and minerals that surrounds the mantle
 - i. Approximately 2-25 miles thick
 - ii. Floats on top of the soft, hot mantle beneath it
 - iii. Rocky crust includes ocean floors and land areas
 - d) Atmosphere: the layer of gases, including the oxygen we need to live that surrounds the Earth
2. Water and Air
 - a) Earth's Water/Land Composition
 - i. Earth is less than 30% land
 - ii. Water covers more than 70% of the Earth
 - iii. Lakes, rivers, seas, oceans
 - b) Oceans
 - i. Hold about 97% of the Earth's water
 - ii. Water is salty
 - c) Fresh Water
 - i. Definition: water without salt
 - ii. Very little of Earth's water is fresh water
 - iii. Most is frozen in ice sheets near the North and South Poles
 - iv. Only a small portion of the Earth's fresh water can be used by humans
 - v. Comes from lakes, rivers, and ground water which are fed by rain
 - d) Atmosphere
3. Landforms
 - a) Definition: shapes and types of land that cover the Earth's surface
 - b) Mountains
 - i. when two plates push against each other, the pressure makes the crust bend and buckle to form steep mountains
 - c) Hills
 - d) Plateau
 - e) Plains

B. Forces Inside the Earth

1. How Continents Move
 - a) The effect of the heat inside of the Earth
 - i. Causes rock to rise toward the surface
 - ii. Streams of Magma reach the earth and may also push the crust apart along seams
 - iii. Plates: huge blocks of Earth's crust separated by seams
 - iv. Ridges: underwater mountains formed when magma from inside Earth cools to form a new crust in the form of rock
 - v. As new ridges form, older crust is pushed away. Plates on either side of a seam move slowly apart
 - vi. When ocean crust plunges beneath land, it melts into streams of magma that rise to the surface
 - vii. Streams of rising magma form chains of volcanoes
 - b) Rising magma forms new crust along surface between the Earth's seams
 - c) Plates
 - i. May include continents or part of continents
 - ii. Include part of the ocean floor
 - iii. Only move an inch or two a year
2. Volcanoes and Earthquakes
 - a) Formation of Volcanoes
 - i. A plate of ocean crust collides with a plate of continental crust
 - ii. The ocean crust plunges beneath the continental plate and melts into streams of magma that rise to the surface
 - iii. Molten rock projects upward onto the surface through a volcano.
 - b) The Ring of Fire
 - i. Surrounds the plates that make up the Pacific Ocean
 - c) Earthquakes
 - i. Occur when block of crust slide sideways against each other
 - ii. Two plates push together and the crust cracks (faults)
 - iii. Movement along the faults releases huge amounts of energy in the form of earthquakes
3. Continental Movement
 - a) Plates shifted through time
 - b) Geographers know that the continents were once close together

C. Forces on the Earth's Surface

1. Forces that Wear Down and Reshape the Earth
 - a) Weathering
 - i. Process that breaks rocks down into tiny pieces
 - ii. Caused by water, ice, and living things on rocks
 - iii. Helps create soil: tiny pieces of rock combine with decayed animal and plant matter to form soil
 - b) Erosion
 - i. The removal of small pieces of rock by water, ice, or wind
 - c) Movement of Materials

- i. When water, ice, and wind remove materials, they deposit it downstream or downwind
- ii. Creates new landforms

III. Climate and Weather

A. The Difference between Weather and Climate

1. Weather: the condition of the air and sky from day to day
 - a) Precipitation: water that falls to the ground as rain, sleet, hail, or snow
 - b) Temperature: how hot or cold the air is
2. Climate: the average weather over many years

B. Climate Regions

1. Why Climates Vary
 - a) Location
 - i. Low latitudes (tropics) have hot climates because they get direct sunlight
 - ii. High latitudes (polar) have cold climates because their sunlight is indirect
 - b) Wind and Water
2. Regions
 - a) Tropical Wet
 - b) Tropical Wet and Dry
 - c) Semiarid
 - d) Arid
 - e) Mediterranean
 - f) Humid Subtropical
 - g) Marine West Coast
 - h) Humid Continental
 - i) Subarctic
 - j) Tundra
 - k) Ice Cap
 - l) Highland

C. The Water Cycle

1. Water Evaporates from the Surface
 - a) Evaporates from bodies of water or land areas where rain has fallen
 - b) Rises to the sky
 - c) Heated water vapor condenses to form clouds
 - i. Made up of little drops of water
 - d) Moist air rises
 - i. Cools and drops its moisture
2. Falls back as Precipitation
 - a) Can occur when air is forced up a mountain slope
 - b) Can occur when air rises in a storm system

- c) Water seeps into the ground or runs into streams
 - i. Flows to the sea or evaporates again

D. Air Circulation and Wind

1. Circular Patterns of Air Movement
 - a) Global belts of circulating air are called cells
 - b) Wherever air rises, its moisture condenses and falls as precipitation
 - c) At the Poles
 - i. Air sinks creating a dry climate
 - ii. The sun's rays reach Earth at a steep angle
 - iii. Air stays cold
 - iv. Very cold air sinks at the poles and flows outward
 - v. The Earth's rotation bends these winds so that they blow from the east
 - d) At the Equator
 - i. Warm, moist air rises at the Equator
 - ii. Direct sunlight at the Equator heats the Earth's surface
 - e) In the Temperate Zones
 - i. Warm winds from the southwest rise over cold polar air
 - ii. Warm air blows toward the Equator where it rises
 - iii. Because of the Earth's rotation, these winds bend to blow from southeast or east
 - f) Arid Climates
 - i. Dry air sinks creating a band of deserts around the continents

E. Weather Forecasting

1. Weather forecasters rely on scientist and equipment.
2. Equipment
 - a) GOES Weather Satellite
 - i. Name for the US weather satellites
 - ii. Geostationary Operation Environmental Satellites
 - iii. Circle the Earth in time with the Earth's rotation
 - iv. Always stay above the same spot
 - b) Weather Satellites
 - i. Use satellites in space to record everything from wind patterns to the height of waves
 - c) Weather Station
 - i. Weather stations send reports to forecaster
 - d) Weather Map
 - i. Used by forecasters to track weather patterns and storm systems and to display data

F. Storms

1. Tropical Cyclones
 - a) Intense wind and rain storms that form over oceans in the tropics
2. Hurricanes
 - a) Tropical cyclones that form over the Atlantic Ocean

- b) Winds can reach more than 100 miles per hour
- c) Storm Surges
 - i. Huge swells of water produced by hurricanes
 - ii. Flood shorelines and can destroy buildings
- 3. Tornadoes
 - a) Funnels of wind that can reach 200 miles per hour
 - b) Winds and the low air pressure they create mass destruction
 - c) Affect smaller areas than hurricanes
- 4. Other Storms
 - a) Blizzards
 - i. Huge amounts of snow
 - ii. Occurs in parts of North America
 - b) Severe Storms
 - i. Severe thunderstorms and rainstorms
 - ii. Strike most often in spring and in summer

G. Oceans and Climates

- 1. Help distribute Earth's heat and shape climates
- 2. Global wind patterns create ocean currents
 - a) Warm water flows away from the Equator
 - b) Cold water moves toward the Equator
- 3. Oceans and Currents
 - a) The Gulf Stream
 - i. Warm current
 - ii. In the Atlantic Ocean
 - iii. Travels northeast from the tropics
 - iv. With the North Atlantic Current, the Gulf Stream brings warm water to western Europe
 - v. This warm water gives Europe a milder climate than other regions at the same latitude
 - b) The Peru Current
 - i. Cold current
 - ii. Moves north from Antarctica along the coast of South America
 - iii. Brings cooler weather in the summer to South America
- 4. The Oceans Cooling and Warming Effects
 - a) Water takes longer to heat or cool than land
 - i. As the air and the land heat up during the summer, the water remains cooler
 - ii. Winds that blow over the cool water cool the land surrounding that water
 - iii. In the winter, the water remains warmer than on the land
 - iv. Places near bodies of water are warmer in the winter than are their inland counterparts

H. Climate and Vegetation

- 1. Five Broad Types of Climate

- a) Tropical
 - b) Dry
 - c) Temperate Marine
 - d) Temperate Continental
 - e) Polar
2. Each climate has its own types of natural vegetation
 - a) Vegetation: plants that grow in a region
 - i. Different plants require different amounts of water and sunlight and different temperatures to survive
 3. Tropical Climates
 - a) Tropical Wet Climate
 - i. Year round rain fall
 - ii. Vegetation: tropical rain forest
 - b) Tropical Wet and Dry Climate
 - i. Two Seasons
 - ii. Rainy Season
 - iii. Dry Season
 - iv. Vegetation: grasslands and scattered tree
 4. Dry Climates
 - a) Arid and Semiarid Climates
 - i. Very hot summers
 - ii. Mild Winters
 - iii. Very little rain
 - iv. Driest arid climate: little or no vegetation
 - v. Some have plants that require very little water
 - b) Semiarid Climates
 - i. Get little more rain
 - ii. Vegetation: shrubs and grasses
 5. Temperate Marine Climates
 - a) Found in the middle latitudes
 - i. Near the coastlines
 - b) Three Types
 - i. Mediterranean
 - ii. Marine West Coast
 - iii. Humid Subtropical
 - c) Mediterranean
 - i. Receive less rain that falls mainly in the winter
 - ii. Hot summers
 - iii. Vegetation: unique Mediterranean vegetation known as "Mediterranean vegetation"
 - iv. Mild Winters
 - d) Marine West Coast
 - i. Get plenty of rain
 - ii. Vegetation: a variety of forests
 - iii. Mild Winters
 - e) Humid Subtropical

- i. Get plenty of rain
 - ii. Rain falls mainly in the summer
 - iii. Mild winter and hot summers
 - iv. Vegetation: a variety of forests
- 6. Temperate Continental Climates
 - a) Humid Continental Climates
 - i. Summer temperatures are moderate to hot
 - ii. Winters can be very cold
 - iii. Vegetation: grasslands and forests
 - b) Subarctic Climates
 - i. Drier with cool summers and cold winters
 - ii. Vegetation: forests
- 7. Polar Climates
 - a) Cold all year round
 - b) Tundra
 - i. An area, near the Arctic Circle, of cold climate and low-lying vegetation
 - ii. Trees cannot grow there
 - iii. *Tundra*: refers to the climate AND the vegetation
 - c) Ice Caps
 - i. Bitterly cold all year round
 - ii. Covered with ice
 - iii. No vegetation can grow there
- 8. Earth's Vegetation Regions
 - a) Earth is divided into regions that share similar vegetation
 - b) Tropical Rain Forest
 - i. Sunlight, heat, rain
 - ii. Canopy: the dense, leafy layer formed by the uppermost branches of the rainforest
 - iii. Other plants grow to lower heights in the shade of the canopy
 - c) Tropical Savanna
 - i. Winter dry seasons and more limited rainfall
 - ii. Savanna: Parklike landscape of grasslands with scattered trees
 - d) Desert
 - i. May be no vegetation at all
 - ii. Plants may grow far apart
 - iii. Their roots absorb scarce water before it evaporate in the heat
 - e) Desert Scrub
 - i. Low desert vegetation that needs little water
 - ii. Some plants flower only when it rains → seeds have a better chance to survive
 - f) Mediterranean Vegetation
 - i. Includes grasses, shrubs, and low trees
 - ii. Plants must hold water from the winter rains to survive warm, dry summers.
 - g) Temperate Grassland

- i. Straddle regions with semiarid and humid continental climates.
- ii. Wetter grasslands, in humid continental climates, have a mix of tall grasses and other plants that is sometimes called prairie.
- h) Deciduous Forest
 - i. Marine west coast, humid subtropical and humid continental climates.
 - ii. Forests of trees that lose their leaves in the fall - deciduous trees.
- i) Coniferous and Mixed Forest
 - i. Combine both coniferous and deciduous trees.
 - ii. Coniferous Trees: trees that produce cones to carry seeds.
 - iii. Generally have needles, not leaves.
 - iv. These features protect trees in drier climates
- j) Tundra
 - i. An area of cold climate and low-lying vegetation
 - ii. Includes: mosses, grasses, and low shrubs that bloom during the brief, cool summers
- k) Highland
 - i. Vegetation depends on elevations, since temperatures drop as elevation rises
- l) Ice Cap and Pack Ice
 - i. Thick ice caps form on the land around the poles.
 - ii. Pack ice: masses of ice that cover the sea.
 - iii. No vegetation can grow there.

PART IV

I. Earth's Human Geography

A. Population Distribution

- 0. Population: total number of people
- 1. Population Distribution: the way the population is spread out over an area
- 2. Demography: the science that tries to explain how populations change and why population distribution is uneven
 - a) Study rates of birth, marriage, and death
 - b) Ask why people move from one place to another
- 3. Population and Places
 - a) Why People Move
 - i. They can live better in a new place
 - ii. Cannot feed their families
 - iii. As long as people can make a living where they are, they usually stay in that area.
 - iv. Regions with large populations tend to keep them.
- 4. Population and History
 - a) People lived on farms where they grew their own food
 - i. Lived where the climate provided enough water and warm weather to support crops
 - ii. Regions with a long history of farming, good soil, and plenty of water became crowded

- iii. Most places too cold or too dry for farming still have small populations
- 5. New Population Clusters
 - a) Improved transportation and new ways of making a living changed the populations
 - i. Railroads and steamships made it easier for people to move long distances
 - ii. New jobs in factories and offices meant that people were living in cities -- where people could make a living without farming
 - b) Crowded cities grew in regions that once had few people
 - i. United States
 - ii. Australia
 - iii. Northern Europe

B. Population Density

- 1. Determining Population Density
 - a) Population of an area / the size of that area in square miles or square kilometers
 - b) Get a sense of how crowded or empty that area is
 - c) Population Density: the average number of people per square mile or square kilometer
- 2. Population Distribution and Population Density
 - a) Both describe where people live
 - b) Difference
 - i. Population Density gives an average number of people for an area
 - ii. Population Distribution: gives actual numbers of people for an area
- 3. The World: Population Density
 - a) Polar Regions
 - i. Low population densities
 - ii. The climate is too cold for farming
 - iii. Snow and ice make transportation difficult
 - iv. Few businesses employ people there
 - v. The ice-covered parts of Greenland have no human inhabitants
 - b) Asia
 - i. Much of the world's population lives in parts of Asia
 - ii. Warm climates and abundant rainfall have supported dense populations of farmers for centuries
 - iii. Tokyo: the world largest urban area, is the capital of Japan
 - iv. Japan is one of the world's most densely populated countries.
 - c) Africa
 - i. Population is densest in areas such as the Nile Valley, with long histories of settled farming
 - d) Canada
 - i. People of rural Canada live far apart in small settlements
 - ii. For example: Village of Red Bay, in Newfoundland
 - e) North America

- i. High populations exist where offices and factories provide jobs

C. Population Growth

1. Birth and Death Rates
 - a) Birthrate: the number of live births each year per 1,000 people
 - b) Death rate: the number of deaths per year per 1,000 people
 - c) Birth and Death rates of the past:
 - i. For thousands of years, the world's population grew slowly
 - ii. Farmers worked without modern machinery
 - iii. Food supplies often were scarce
 - iv. People lived without clean water or waste removal
 - v. Many people died of diseases
 - vi. Although the birth rate was high, so was the death rate = short life expectancy
 - vii. Life expectancy: the average number of years that people live
2. Reasons for Population Growth Today
 - a) New Farming Methods
 - i. The Green Revolution: these recent scientific improvements in agriculture
 - ii. Increased the world's food supply
 - iii. Improved important food crops
 - iv. Found new ways to protect crops against insects
 - v. Found ways to raise crops with less water
 - b) Scientific Advances in Health and Medicine
 - i. Scientists have convinced local governments to provide clean drinking water and sanitary waste removal
 - ii. These measures sharply reduce disease
 - iii. Developed vaccines to prevent disease and antibiotics to fight infections
3. The Challenges of Population Growth
 - a) The effects on all aspects of life
 - i. Population can grow faster than the food supply
 - ii. Populations are increasing so fast that not everyone can find jobs
 - iii. There are not enough schools to educate the growing number of children
 - iv. Decent housing is scarce
 - v. Public services (i.e. sanitation and transportation) are inadequate
 - b) Effect on the environment
 - i. Forests in many countries are disappearing → people in poorer countries cut down trees for fuel and wood
 - ii. Demand for wood and fuel in wealthier countries also uses up the world's scarce resources
 - c) The problem with clearing forests
 - i. In forests, trees' roots hold soil in place
 - ii. Forest soils soak up rain

- iii. With the forest gone, heavy rainfall may wash away the soil and causes flooding
- iv.

D. Migration

1. Why people migrate
 - a. Migration: people's movement from one place or region to another
 - b. Immigrants: people who move into one country from another
 - c. Statistics
 - i. 1850-1930: 30 million Europeans moved to the United States
 - ii. Since 1971: more than 4.5 million people have migrated from Mexico to the United States and more than 2.5 million have migrated from the Caribbean islands
 - iii. Since 1971: Central America, the Philippines, China, and Vietnam have lost more than 1 million people to the United States
 - iv. More than 800,000 immigrants have come to the United States from both South Korea and India
2. Voluntary Migration in the Past
 - a. Voluntary migration: the movement of people by their own choice
 - b. The "Push-Pull" Theory
 - i. People migrate because difficulties "push" them to leave
 - ii. At the same time, hope for a better life "pulls" people to a new country
 - c) Example: the 1840 Irish Potato Famine
 - i. Disease destroyed Ireland's main crop: potatoes
 - ii. Hunger "pushed" people to migrate
 - iii. Jobs and opportunities "pulled" Irish families to the United States
3. Voluntary Migration Today
 - a) The same theory explains most migration today
 - b) The main sources of migration are countries where many people are poor and jobs are few
 - c) For some, wars have made life dangerous and difficult
 - d) China, Vietnam, and Cuba
 - i. Governments limit people's freedom
 - ii. These problems push people to leave
 - iii. The possibility of good jobs and political freedom pulls people to the United States (and other well-off, democratic countries)
4. Involuntary Migration
 - a) People who are forced to (do not choose to) move
 - b) War, escaping death or serious danger
5. The Transatlantic Slave Trade
 - a) Biggest involuntary migration
 - b) 1500s-1800s
 - i. Millions of Africans were enslaved and taken against their will to European colonies in North and South America
 - ii. Traveled under inhumane conditions across the Atlantic Ocean
 - iii. Chained inside ships for more than a month
 - c) Their Descendents in the United States

- i. At first they lived mainly on the east coast
- ii. As cotton farming spread west, many enslaved African Americans were forced to migrate again.
- iii. Went to new plantations in the Mississippi Valley and Texas

E. Urbanization

1. Urbanization: the movement of people to cities and the growth of cities
2. Cities and Suburbs
 - a) The Growth of Industry during the 1800s
 - i. In Europe and in North America, people were pulled from the countryside to cities
 - ii. They hoped for jobs in factories and in offices
 - b) Urbanization gives way to Suburbanization
 - i. Has taken place since about the 1950s
 - ii. Suburbanization: the movement of people to growing suburbs
 - iii. Sometimes replaces valuable farmland with sprawling development
 - iv. Can increase pollution: because most people in suburbs rely on cars for transportation
 - v. Many people still move to suburbs to pursue the dream of home ownership.
3. Urbanization and Other Continents
 - a) Rural areas: areas in the countryside
 - b) Urban areas: areas in cities and nearby towns
 - c) Why people flock to big cities
 - i. Life in the countryside can be harder than life in the cities
 - ii. There are few jobs and a shortage of land to farm
 - iii. Seeking better life for their families
 - iv. They are looking for jobs, modern houses, and good schools
 - d) Asia, Africa and Latin America
 - i. People are still streaming from the countryside to growing cities
 - ii. Too many people are moving to the city too fast
 - iii. Cities cannot provide the housing, jobs, schools, hospitals, and other services that people need
 - iv. Traffic jams and crowds make getting around a struggle

II. Economic Systems

A. Different Kinds of Economies

1. Vocabulary
 - a) Economy: a system in which people make, exchange, and use things that have value
 - b) Producers: owners and workers
 - c) Consumers: people who buy and use the products
2. Three Basic Economic Questions

- a) What will be produced?
- b) How will it be produced?
- c) For whom will it be produced?
- 3. Private Ownership
 - a) Capitalism: an economic system in which private individuals own most business
 - i. Free market economy because producers compete freely for consumers business
 - ii. People may invest in (or commit money to) a business
 - iii. Owners of a business are also investors in that business.
 - b) Banks
 - i. People may save money in a bank
 - ii. Banks lend money to people and businesses in return for interest
 - iii. Interest: a percentage fee for the use of money
- 4. Government Ownership
 - a) Communism: an economic system in which the central government owns farms, factories and offices
 - i. Controls the prices of goods and services, how much is produced, and how much workers are paid
 - ii. The government decides where to invest resources
 - b) Today, only a few of the world's nations practice communism
- 5. Mixed Ownership
 - a) Hardly any nation as a "pure" economic system
 - i. United States has a capitalist economy
 - ii. Governments run schools, build and maintain roads and provide other services

B. Levels of Economic Development

- 1. Developed Nations
 - a) Definition: nations with more industries and more advanced technology
 - i. People use goods made in factories
 - ii. Businesses use advanced technologies to produce goods and services
 - b) Only about 1/5 of the world's people live in developed nations
 - c) Nations
 - i. United States
 - ii. Canada
 - iii. Japan
 - iv. Most European Nations
 - d) Most people live in towns and cities
 - i. Work in offices and factories
 - ii. Machines do most of the work
 - iii. Most people have enough food and water
 - iv. Most citizens can get an education and healthcare
 - e) Food is grown by commercial farmers
 - i. Farmers who grow crops mainly for sale rather than for their own needs

- ii. Commercial farms use modern technologies so they need fewer workers than traditional farms
- f) Problems
 - i. Unemployment
 - ii. Pollution
- 2. Developing Nations
 - a) Nations with fewer industries and simpler technology
 - b) Nations
 - i. Africa
 - ii. Asia
 - iii. Latin America
 - c) Farms
 - i. Subsistence farmers: farmers who raise food and animals mainly to feed their own families
 - ii. Have little or no machinery
 - iii. People and animals do most of the work
 - d) Challenges
 - i. Disease
 - ii. Food shortages
 - iii. Unsafe water
 - iv. Poor education
 - v. Healthcare
 - vi. Political unrest
 - e) Confronting these challenges
 - i. Some nations have grown richer by selling natural resources (Saudi Arabia and South Africa)
 - ii. Built successful industries (China and Thailand)

C. World Trade Patterns

- 1. Different Specialties
 - a) Different countries have different economic strengths
 - i. Developed nations have strong industries with advanced technology
 - ii. Some developing nations have low-cost industries
 - b) Each country has a different set of economic specialties
 - i. Some developing nations may grow plantation cash crops or they may produce oil or minerals
 - ii. Each country has products that consumers in other countries want
- 2. Interdependence
 - a) Developed nations and their relationships with developing nations
 - i. Developed nations tend to sell products made using advanced technologies
 - ii. Developing nations tend to sell food, natural resources such as oil, and simple industrial products
 - iii. Developed nations trade their high-technology products with developing nations for food or other natural resources.
 - b) Trade Alliances

- i. Formed to reduce the costs of trade
 - ii. NAFTA: North American Free Trade Area
 - iii. EU: European Union
 - iv. Businesses may face increased competition from foreign competitors within these alliances
 - v. Workers may lose their jobs
 - vi. Businesses may benefit from increased sales in other countries
 - vii. Consumers benefit because they pay less for products made in other countries
3. How World Trade Works (For Example: Country A, Country B, and Country C)
- a) Country A: produces more oil than it needs
 - i. It sells this oil
 - ii. Able to buy computers and wheat
 - b) Country B: produces more wheat than it needs
 - i. Sells this wheat
 - ii. Able to buy oil and computers
 - c) Country C: produces more computers than it needs
 - i. Sells these computers
 - ii. Able to buy wheat and oil

III. Government

A. Types of States

- 1. Governments: organizations that set up and enforce laws
 - a) States: regions that share a government
- 2. Dependencies and Nation-States
 - a) Dependencies: regions that belong to another state
 - b) Nation-States: states that are independent of each other
 - i. Has a common body of laws
 - ii. Example: Vatican City
- 3. How States Developed
 - a) City-States: small city-centered states
 - b) Empires: states containing several countries
 - c) Formation in about 1500
 - i. European rulers founded the first true nation-states
 - ii. European nations established dependencies all over the world
 - iii. Those dependencies became independent
 - iv. Formed new nation-states

B. Types of Government

- 1. Direct Democracy
 - a) Form of government in which all adults take part in decisions
- 2. Tribal Rule
 - a) Members of a tribe had a say in group decisions
 - i. Chiefs or elders usually made the final decision

- ii. Decisions were based upon the culture's customs and beliefs
- 3. Absolute Monarchy
 - a) A system in which a king or queen who inherits the throne by birth has complete control
- 4. Dictatorship
 - a) Dictator: a leader who is not a king or queen but who has almost total power over an entire country
 - i. Don't inherit power
 - ii. Seize power
 - iii. Usually remain in power by using violence against their opponents
 - iv. Deny their people the right to make their own decisions
 - b) Dictatorship: rule by a dictator
- 5. Oligarchy
 - a) Governments controlled by a small group of people
 - i. May be the leadership of a ruling political party
 - ii. Ordinary people have little say in decisions
 - b) Types of Oligarchy
 - i. Those run by a groups of military officers (i.e. Burma)
 - ii. Those run by a group of religious leaders (i.e. Iran)
- 6. Constitutional Monarchy
 - a) Government in which the power of the king or queen is limited by law
 - i. The king or queen is often only a symbol of the country
 - b) Constitutions: sets of laws that define and often limit the government's power
- 7. Representative Democracy
 - a) Governments run by representatives that the people choose
 - b) Power and the people
 - i. People indirectly hold power to govern and rule
 - ii. They elect representatives who create laws
 - iii. People have to power to refuse to reelect a person
 - iv. Can work to change laws they don't like
 - v. Constitution: sets rules for elections, defines the rights of citizens, and limits the power of the government to ensure that power is shared

C. International Organizations

- 1. Alliances
 - a) Alliances: nations who make an agreement to work together
 - b) Allies: members of an alliance
- 2. Purposes
 - a) Military
 - i. NATO: North Atlantic Treaty Organization
 - ii. Defend any fellow member who is attacked
 - b) Economic
 - i. EU: European Union
 - ii. Promotes economic unity among member nations in Europe
- 3. The United Nations

- a) International: involving more than one nation
- b) Purpose
 - i. Resolve disputes and promote peace
- c) Members
 - i. Almost all nations of the world belong to the United Nations
 - ii. Every member has a vote in the General Assembly
 - iii. Only the UN Security Council can make decisions over the use of force
 - iv. The United States and four other permanent members have the power of veto in the Security Council
- d) Sponsor of other international organizations with special purposes
 - i. Food and Agriculture Organization: combats hunger worldwide
 - ii. United Nations Children's Fund (UNICEF) promotes the rights and well-being of children

IV. Cultures and Societies

A. What is Culture?

1. Culture
 - a) The way of life of a people
 - i. Their beliefs
 - ii. Their customs
 - iii. Their practices
2. Elements of Culture
 - a) Cultural Traits
 - i. Ideas and ways of doing things
 - ii. Over time cultural traits may change
 - b) Material Components of Culture
 - i. Houses
 - ii. Television sets
 - iii. Food
 - iv. Clothing
 - v. Sports
 - vi. Literature
 - c) Components you cannot see or touch
 - i. Spiritual beliefs
 - ii. government
 - iii. Ideas about right and wrong
 - iv. Language
3. People and Their Land
 - a) Human activities related to the environment and culture
 - i. Human-environment interaction: how the environment affects culture
 - b) The effect people have on their environment
 - i. Often tied to a culture's technology
 - c) Cultural landscape
 - i. The parts of a people's environment that they have shaped and the technology they have used to shape it.

- ii. Varies from place to place

B. The Development of Culture

1. Technology and Civilization
 - a) Civilizations: advanced cultures with cities and the use of writing
 - b) Hunters and Gatherers
 - i. People traveled from place to place
 - ii. They collected wild plants, hunted game, and fished
 - c) The Agricultural Revolution and the Domestication of Animals
 - i. People discovered how to grow crops
 - ii. Tamed wild animals to help them work or to raise for food
 - iii. Provided a steady food supply
 - iv. Let farmers grow more food than they needed (surplus)
 - v. The surplus allowed artisans (specialized workers who make goods by hand) to trade their products for food
 - vi. People began to develop laws, government, systems of writing, and irrigation
 - d) New technologies that used power-driven machinery
 - i. Change marked the beginning of the Industrial Revolution
 - ii. Led to the growth of cities, science, and even more advanced technologies such as computers and space flight
2. Development of Institutions
 - a) Simple Institutions
 - i. Institutions: customs and organizations with social, education, or religious purposes
 - ii. Extended families
 - iii. Simple political institutions such as councils of elders
 - b) Complex Institutions
 - i. Formed as people gathered in larger groups and formed cities
 - ii. Developed organized religions with priest, ceremonies, and temples
 - iii. States developed armies and governments
 - iv. Teachers founded schools
 - c) Modern Institutions
 - i. Museums
 - ii. Sports Clubs
 - iii. Corporations
 - iv. Political Parties
 - v. Universities

C. How Society is Organized

1. Social Structure
 - a) Society: a group of people sharing a culture
 - i. Every society has a social structure
 - ii. Social structure: a pattern of organized relationships among groups of people within the society
 - iii. Small community

- iv. Large nations
- v. Helps people work together to meet one another's basic needs
- 2. Social Classes
 - a) Groupings of people based on rank or status.
 - b) Status
 - i. Wealth
 - ii. Land
 - iii. Ancestors
 - iv. Education
 - c) Social Mobility
 - i. In some cultures, in the past, it was hard (or impossible) for people to move from one social class to another.
 - ii. Today many people in many societies can improve their status through a good education, by making more money, or by marrying someone of a higher class.
- 3. Kinds of Families
 - a) Nuclear Family
 - i. A mother, father, and their children
 - ii. Common in developed nations
 - iii. Gets its name from the word *nucleus* which means "center"
 - b) Extended Families
 - i. Families that include several generations
 - ii. In addition to a central nuclear family of parents and their children, there are wives or husbands of those children
 - iii. Includes grandchildren
 - iv. Older people help care for the children
 - v. Respected for their knowledge and experience
 - vi. Pass on traditions
 - vii. Extended families are less common

D. Language

- 1. Language and Culture
 - a) Language provides the basis for culture
 - i. People learn their culture through language
 - ii. Communication with others depends on language
 - iii. Language preserves shared ideas and traditions
 - b) Culture's language reflects the things that are important to that culture
- 2. Major Language Groups
 - a) Languages in each of these groups share a common ancestor
 - b) North America
 - i. Indo-European
 - ii. Altaic
 - iii. "Other"
 - c) South America
 - i. Indo-European
 - ii. Altaic

- iii. "Other"
- d) Europe
 - i. Indo-European
 - ii. Uralic
- e) Asia
 - i. Sino-Tibetan
 - ii. Japanese and Korean
 - iii. Dravidian
 - iv. Indo-European
 - v. Austronesian
- f) Africa
 - i. Afro-Asiatic
 - ii. Niger-Saharan
 - iii. Niger-Congo
 - iv. Indo-European
 - v. Austronesian
- g) Australia
 - i. Indo-European
 - ii. "Other"

E. Religion

1. Beliefs and Practices
 - a) Vary
 - i. monotheistic: believe in one god
 - ii. polytheistic: believe in many gods
 - b) Prayers and Rituals
 - i. Celebrate important places and times
 - c) All religions expect people to treat one another well and to behave properly
2. Purpose
 - a) Help people make sense of the world
 - b) Provide comfort and hope for people facing difficult times
 - c) Help answer questions about the meaning and purpose of life
 - d) Guides people in ethics, standards of accepted behavior
3. Major Religions
 - a) Christianity
 - i. Roman Catholic
 - ii. Protestant
 - iii. Eastern Churches
 - b) Islam
 - i. Shi'a
 - ii. Sunni
 - c) Other Major Groups
 - i. Hinduism
 - ii. Buddhism
 - iii. Sikhism

- iv. Judaism
- v. "Traditional"

F. How Culture Changes

1. Why Cultures Change
 - a) Culture is an entire way of life
 - b) Change in one part affects change in other parts
 - c) Cultural Change over time
2. New Technologies
 - a) Growth of Industry
 - i. Spread of factories
 - ii. Pulled people from the countryside to the cities
 - iii. Limited transportation meant that people lived close to the factories
 - iv. Cities grew as a result
 - b) Invention of the Car
 - i. People could live farther from their jobs
 - ii. Idea of owning a house with a yard became popular
 - iii. Growth of suburbs
 - iv. New culture based on car travel

G. How Ideas Spread

1. Cultural Diffusion
 - a) The movement of customs and ideas
2. How Cultures Adopt New Ideas
 - a) Acculturation
 - i. The process of accepting new ideas and fitting them into a culture
3. Communication Technology and the Speed of Change
 - a) Communication technology has increased the speed of change
 - i. Faxes
 - ii. Computers
 - iii. Magazines and television
 - iv. Phone
4. Defending Traditions
 - a) Change that hurts
 - b) Change that moves too fast
 - i. People may feel as though their culture is being threatened
 - ii. Can lose valuable traditions
 - c) Preserving Culture
 - i. Do not want to lose what is valuable in their culture
 - ii. Save artistic tradition, religious beliefs, and wisdom passed from generations

V. People and Their Environments

A. Natural Resources

1. Natural Resources and Raw Materials

- a) Natural Resources: useful materials found in the environment
 - i. Water, Minerals, and Vegetation
- b) Raw Materials: natural resources that must be worked to be useful
- 2. Renewable Resources
 - a) Resources that can be replaced
 - i. Replaced naturally because of the way the earth works
 - ii. For example: the water cycle
 - b) Renewable energy sources
 - i. Using wind to make electricity
 - ii. Wind results from differences in the way the sun heats the earth
 - iii. Solar energy: energy from the sun
 - iv. Geothermal energy: uses differences in heat between Earth's surface and its interior
- 3. Living Resources
 - a) Living things that provide natural resources
 - i. Plants and animals
 - ii. Have a steady supply of renewable living resources
- 4. Nonrenewable Resources
 - a) Resources that cannot be replaced
 - i. Most nonliving things
 - b) Minerals
 - i. Metal ores
 - ii. Natural gas
 - iii. Petroleum
 - iv. Crude oil
 - v. Need to use these resources carefully
 - c) Recycling
 - i. Does not return these materials to their natural state
 - ii. Still be recovered and processed for reuse
 - iii. Helps to conserve nonrenewable resources
- 5. Fossil Fuels
 - a) Fuels created over millions of years from the remains of prehistoric living things
 - b) Types
 - i. Coal
 - ii. Natural Gas
 - iii. Petroleum
 - c) Renewable or nonrenewable?
 - i. If oil and natural gas are fossil fuels - they are renewable
 - ii. Living things today will become fossil fuels in millions of years
 - iii. If they take so long to develop, they are NONRENEWABLE for our purposes

B. Energy

- 1. A Special Resource
 - a) Fossil fuels, wind, sun, dams (hydroelectric power)

- b) Needed to make use of other natural resources
 - i. It takes energy to harvest
 - ii. It takes energy to manufacture
 - iii. It takes energy to transport
- 2. Energy "Have's" and "Have Not's"
 - a) Unequal distribution of Energy Resources
 - i. Countries with many rivers can use water to generate electricity
 - ii. Countries like Mexico and Saudi Arabia have huge amounts of oil that they sell to other countries
 - iii. Energy "Have Not's" must purchase energy from other countries
- 3. Meeting Energy Needs in the Future
 - a) Alternate Sources of Energy
 - i. Wind and solar energies
 - ii. Tidal energies: from the rise and fall of Earth's oceans
 - iii. Geothermal energies: energy from the heat of the Earth's interior
 - iv. Biomass: Plant material
 - b) Atomic Energy
 - i. Uses radioactive materials
 - ii. Radioactive materials are nonrenewable, but are plentiful
 - iii. Opposition to atomic energy → radioactive materials can be dangerous
 - iv. Support of atomic energy → plentiful energy source that does not pollute the air
 - c) New Technologies
 - i. Fossil fuels will last longer if people use less energy
 - ii. Hybrid cars: can reduce a country's need for imported oil by burning less gas per mile
 - iii. Other technologies offer energy saving in heating and lighting buildings and in making new products
 - iv. If people use less energy, they will not need to buy as much from foreign countries
 - v. Will have an easier time meeting their energy needs in the future.

C. Land Use and Culture

- 1. Environments
 - a) Natural Surroundings
 - i. How people use the land depends on their culture
 - ii. May use their land differently because their cultures have developed in different environments
 - iii. Even in similar environments, people may use land differently because they have different cultural traits
- 2. Cultures and Landscapes
 - a) People's culture help shape the landscapes where they live
 - i. Example: Philippines, a culture of rice farming and a shortage of level land has led people to carve terraces into hillsides.

- ii. Example: Western Europe used to be covered with forests. As farming culture spread people cleared forests for farming. Today, most of Western Europe is open fields and pastures
- 3. Land Use and Cultural Differences
 - a) Similar environments do not necessarily produce similar cultures
 - i. People respond differently to those environments, depending on their culture
 - b) Cultures face similar environments but they interact with those environments differently

D. Land Use and Economic Activity

- 1. The Three Stages of Economic Activity
 - a) Geographers use these stages of economic activity as a way to understand land use
 - i. Farming
 - ii. Manufacturing
 - iii. Retail sale
- 2. First Level Activities
 - a) Use land and resources directly to make products
 - i. May hunt, cut wood, mine, or fish
 - ii. Herd animals or raise crops
 - b) People interact directly with the land or the sea
 - i. Most of the world's land is used for first-level activities
 - c) In developed countries, only a small percentage of people make a living at first-level activities
- 3. Second-Level Activities
 - a) People process the products of first-level activities
 - b) Manufacturing
 - i. Large-scale production of goods by hand or by machine
 - ii. Manufacturing, especially in urban areas, is an important land use in developed countries.
- 4. Third-Level Activities
 - a) Known as 'services"
 - i. Do not produce goods
 - ii. Help sell goods
 - iii. Involve working directly for customers or for businesses
 - iv. Part of everyday living
 - v. services are also clustered in urban areas

E. Changes in Land Use

- 1. Colonization
 - a) A movement of new settlers and their cultures to a country
 - i. May change that region's landscape to fit their cultural practices
 - ii. As people find new ways to of making a living, they start using the land in new ways too
- 2. Industrialization and Sprawl

- a) Industrialization: the growth of machine-powered production
 - i. Changed landscapes in many countries
 - ii. Cities have grown around industrial facilities
- b) Sprawl
 - i. The spread of cities and suburbs
 - ii. Since the 1900s, suburbs have spread out from cities to cover more and more land

F. First-Level Activities

1. Creating Farmland
 - a) As countries have grown, they have met the challenge of feeding their people in different ways
2. Environmental Challenges
 - a) Agriculture, forestry, and fishing
 - i. Provide food and resources that people need to live
 - ii. Also have harmful effects on the environment
 - b) Deforestation: the loss of forest cover in a region
 - i. May result in the loss of more than trees and other plants
 - ii. Animals that depend on the forest for survival may also suffer
 - iii. May lead to a loss of biodiversity
 - iv. Biodiversity: a richness of different kinds of living things
 - c) Fertilizers and chemicals
 - i. Makes it possible to feed more people
 - ii. When rain washes these chemicals into streams, they sometimes harm fish and other water-dwelling creatures
 - iii. If fishers catch too many, they may threaten the fishes' survival
 - iv. Farmers and fishers face the challenge of feeding the world's people without harming important resources
3. Finding a Balance
 - a) Planting tree farms for timber
 - i. When the trees mature, they can be cut and new trees can be replanted without harming ancient forests
 - b) Farmers can grow crops using natural methods or chemicals that will not damage waterways
 - c) Fishers can limit their catch of endangered fish and harvest fish that are plentiful

G. Second and Third - Level Activities

1. Providing Jobs, Reshaping the Environment
 - a) Industrial and service activities are the basis for the developed countries' prosperities
 - i. Provide most of the jobs in developed countries
 - ii. Main land use in urban areas
 - b) Civil Engineering
 - i. Technology for building structures that alter the landscape, such as dams, canals, roads, and bridges

- ii. Dams: create reservoirs that cover large areas with water, provide water for farms and cities and protect areas downstream from flooding
 - c) Side Effects on the Environment
 - i. Use large amounts of resources and release industrial wastes into the environment
 - ii. Require the construction of roads, telephone lines, and power lines
- 2. Environmental Challenges
 - a) Pollution
 - i. Waster that makes the air, soil, or water less clean
 - ii. Trash may pollute the soil, water, or air
 - iii. Exhaust from cars and trucks
 - iv. Scientists believe that air pollution may cause higher temperatures or other changes in our climate
- 3. Finding Solutions
 - a) Use more fuel-efficient vehicles
 - i. Hybrid cars
 - ii. Vehicles that burn less fuel create less air pollution
 - b) Renewable energy sources can reduce the need to burn fuels that pollute the air
 - i. Solar and wind power
 - ii. May reduce the risk of harmful climate changes
 - c) Waste Recycling
 - i. Reduces the amount of waste that local government must burn or dump
 - ii. Saves natural resources