

Introduction to Geography

5 Themes of geography

5 Themes:

1. **Location**- absolute and relative space (where things are)
2. **Place**- characteristics that make a location unique
3. **Movement**- the what, where, why and how of diffusion of phenomena across the earth
4. **Regions**- regional science or study. Studying the various phenomena of a particular area in the world
5. **Human-Earth Relationships**- the impact of the environment on people and their impact on the environment. The relationship between human societies and the environment.

3 Sub-areas of Geography

1. Physical geography: Biogeography
2. Cultural Geography
3. Techniques
-- geographers, environmental determinism

Latitude & Longitude

Lines of latitude vs longitude, know the major lines of each

- **Latitude:** runs east and west, measured north to south.
- **Longitude:** runs north and south, measured east to west.
- 23.5 degrees N= Tropic of Cancer
- 23.5 degrees S= Tropic of Capricorn
- 66.5 degrees N= Arctic
- 66.5 degrees S= Antarctic
- 90 degrees N= North pole
- 90 degrees S= South pole
- 180 degrees= International dateline
- 0 degrees longitude= Prime meridian
- 0 degrees Latitude= Equator

Definition of each of the four earth spheres

- **Atmosphere**- thin gaseous veil that surrounds the Earth
- **Hydrosphere**- all the water above, on and in the Earth in all 3 states. *Comprises 71% of the Earth's Surface*

- **Lithosphere**- Earth's crust and a portion of the upper mantle
- **Biosphere**- Interconnection between living organisms of the planet with their physical environment. Life zone of the planet.

Systems

- common to study systems= all the factors influencing an area or particular phenomena.
- **Open system**: boundaries or interfaces freely permit transfer of energy and matter across them (cars, energy in, waste out)
- **Closed System**: self-contained system exhibiting no exchange of energy or matter across boundaries.
- **Equilibrium**; the changing or relatively non-changing conditions of a system.
 - o **Steady-state Equilibrium**: when a system is in balance over time, is neither growing nor contracting but is in full operation; may oscillate around an average level or condition.
 - o **Dynamic Equilibrium**: a system fluctuates around an average value but demonstrates a trend over time.
 - o **Feedback**- change in one part of a system causes change in another part
 - **Negative feedback**- keeps system in original condition, self-regulation. No tremendous change. Example: Ice sheets, don't absorb heat ice stays cold, keeps air cold, keeps ice cold, etc.
 - **Positive feedback**- induces a progressively greater change, "snowball effect" Example: Hurricane, absorbs energy which in return allows it to absorb more energy making the hurricane grow.

What are Resources?

vital vs essential, material vs non-material

- **Resource**= anything obtained from the environment to meet the needs/wants of individuals, populations, and species.
- **Vital Resource**= those resources necessary for sustaining basic life (food, water, air)
- **Essential Resource**= those resources considered necessary for modern human life (energy-oil, farmland, trees, various minerals-iron aluminum, etc. clothes, etc.)
- **Tangible/material resource**- a resource which can be quantified, can be measured and its supply may be limited (oil, gas, coal, trees, etc.)
- **Non-material/intangible resource**- those resources that cannot be measured and usually not touched or felt (beauty, love, solitude, aesthetics, etc.)

renewable vs non-renewable, sustained yield, resource scarcity

- **Non-renewable or exhaustible resource**= a resource which exists in a fixed amount in various places. Have the potential to be "renewed" but not within the human time scale (billions of years). examples: coal, oil, natural gas, iron, copper, aluminum, slate clay, sand
- **Renewable or potentially renewable resource**= a resource that can be replenished at fairly rapidly rate through natural processes, on a human time scale. examples: trees, plants, wild and domesticated plants and animals, fresh water, soil
- **Perpetual resource**: a resource that is essentially inexhaustible on a human time scale (solar energy, wind).
- **Resource Scarcity**: how scarce or abundant a resource is.
- **Sustained Yield**: The highest rate at which a renewable resource can be used without reducing its available supply throughout the world or in a particular place. (Harvesting trees at a particular rate, or only so many fish so certain percentage remain in the environment.
- **Environmental Degradation**: depletion or destruction of a renewable resource, that is used faster than it is naturally replenished.
- **Relative Resource Scarcity**: when enough of a resource is still available to meet demand, but its distribution is unbalanced.
- **Depletion time**: the time it takes to use certain fraction, usually 80% of the known supply of a non-renewable resource.

Resource-Environment Issues

natural sciences, economic systems, political, cultural systems

- **Natural Sciences**- biology (ecology, zoology, botany, etc.), Chemistry (biochemistry, organic, etc), Atmospheric, oceanography, geology, physics, etc.
- **Economic Systems**- Effects of agricultural vs. industrial systems. Capitalists vs Socialists. Use of resources, types and amounts, with each type of system (same or different). Level and types of pollution from these activities.
- **Political Systems**- business friendly vs. environmentally friend or a mixture of the two and at what ratio. Favor exploitation of resources or conservation or a mixture. Intensive subsistence agriculture.
- **Cultural Systems**- strong feelings of being a part of nature vs being above nature/better than. How do we see ourselves in relation to nature. Environmental World views- *Atomistic vs Holistic*

Common themes: population issues, sustainability of resources, etc

- **Population Issues**- increasing or decreasing population, *Carrying capacity* Minimal vs Optimal. Ecological footprint.
- **Urban vs Suburban vs Rural resource use**- differences/similarities. Quantities used in one area vs another,