

Five Themes of Geography



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Today's Talk

- What is the state of geography education?
- What is geography?
- What are the five themes?
- What are the bigger questions and issue underlying the five themes?

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Geography Education in Crisis

National Geographic - Roper  
Global Geographic Literacy Survey



Conducted by RoperASW for the  
National Geographic Education Foundation

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## Methodology

- Survey of 18- to 24-year-olds in nine countries: Canada, France, Germany, Great Britain, Italy, Japan, Mexico, Sweden and the U.S.

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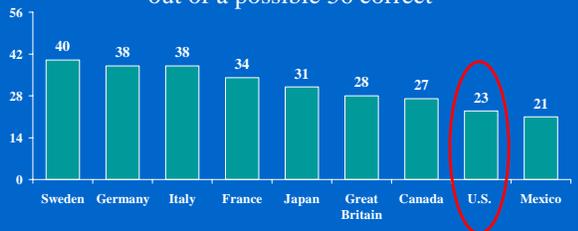
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## Overall Results

Average # of correct answers out of a possible 56 correct



Sample: 18- to 24-year-olds

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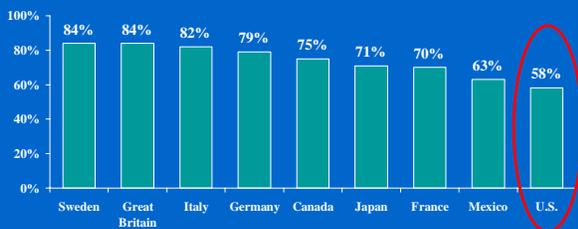
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## World Hotspots

Percentage of young adults naming Afghanistan as the base of the Taliban/al Qaeda



Sample: 18- to 24-year-olds

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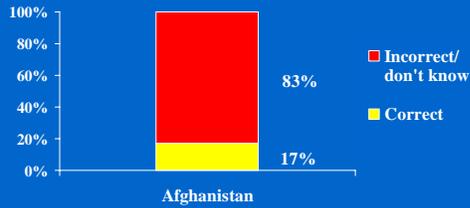
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## World Hotspots

Percentage of young U.S. adults correctly identifying Afghanistan on a world map



Sample: U.S. 18- to 24-year-olds

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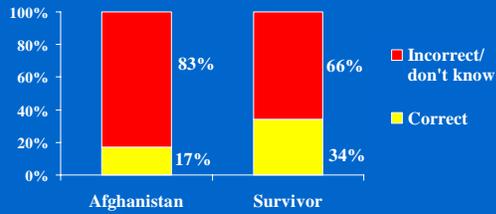
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## Pop Culture

Percentage of young U.S. adults correctly identifying Afghanistan on a world map vs. knowing where the last season of "Survivor" was filmed



Sample: U.S. 18- to 24-year-olds

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## Country Location Skills

Percentage of young Americans who simply said "I don't know," when asked to find \_\_\_ on a world map



Sample: U.S. 18- to 24-year-olds

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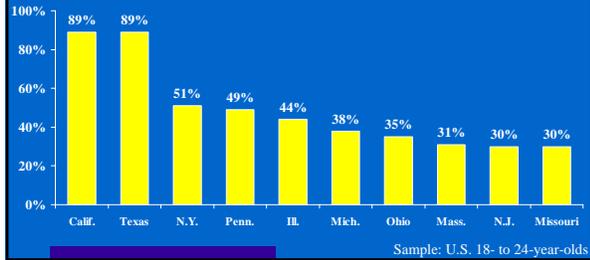
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## State Location Skills

Percentage of young Americans correctly identifying \_\_\_ on a map of the United States




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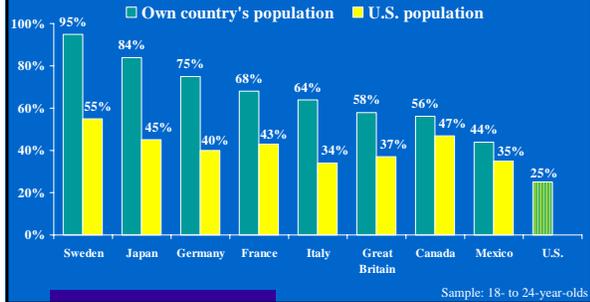
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## U.S. Population

Percentage of young adults correctly identifying...




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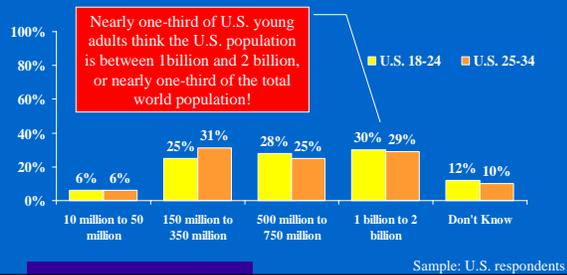
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## U.S. Population

Percentage of young Americans believing the U.S. population falls within the following ranges




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## Media is not always a good teacher



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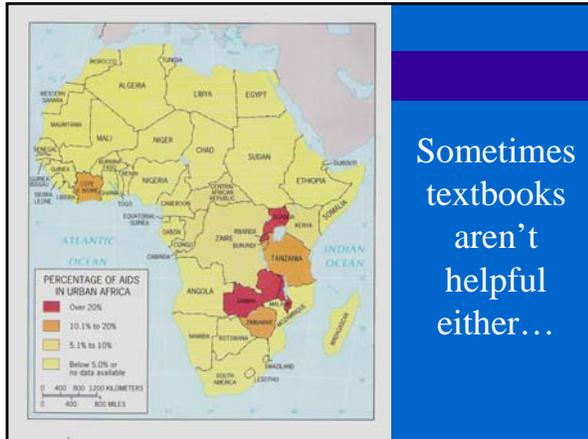
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Sometimes textbooks aren't helpful either...

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## Geography: A Primer

- What is geography?
  - Poorly understood discipline
  - Popular View: A body of information and facts
  - In Reality: A perspective of the world and how it works
- What is a geographic perspective?
  - More than simply memorizing the names of capitals and rivers

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## Five Themes of Geography

1. Location
2. Place
3. Movement
4. Human-Environment Interaction
5. Regions

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## Theme of Location

- Why does location matter?
  - Part of one's identity and frame of reference
    - Territoriality
  - Basis of our communities
    - Vote by district and state—Why?
  - Source of opportunities and constraints in people's daily lives
    - Spatial mismatch of where you live and where you work
  - Shapes interactions and connections between places
    - Neighborhood effect

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## Rejoin Pangaea (super-continent)



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## 2 traditional expressions of location

- Absolute Location
- Relative Location—Situation

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## Absolute Location

- Absolute Location
  - Position or site in terms of geographic coordinate system
  - Often Mathematical
  - Most common: Latitude & Longitude
  - Another form: Street address
  - Unique identification in space

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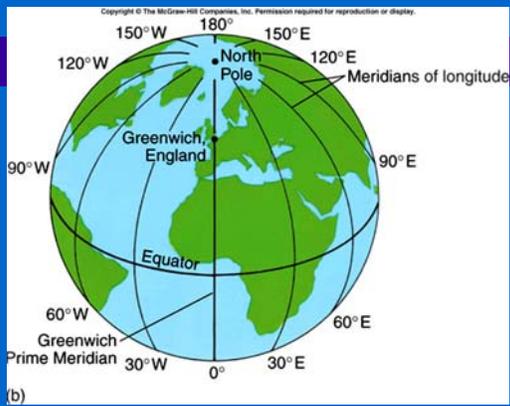
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## Imp. Facts about Lat. And Long.

	Latitude	Longitude
Min-max values	0-90 deg.	0-180 deg.
Major lines	Equator (0) Poles (90)	Prime Meridian (0) Intl. Date Line (180)
Lines	Parallel	Converge at poles
Measures	N-S of Equator	E-W of Prime Meridian

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## Relative Location

- Relative Location
  - Position in relation to other places
  - How a place interacts or connects with rest of world (its situation)
  - Related to accessibility—ease with which to reach
  - Location in relation to transportation, communication, external connections

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## Panama

- Absolute Location: 8° 58' N 79° 33' W
- Relative Location: Middle America, borders and connects (with canal) Caribbean Sea and the North Pacific Ocean, bridge between Colombia and Costa Rica




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## Bigger questions related to location

1. Don't stop at: Where are things located?
2. Why are things located where they are?
3. How are things in one location related to things in another location? (spatial patterns)
  - Maps important for studying patterns

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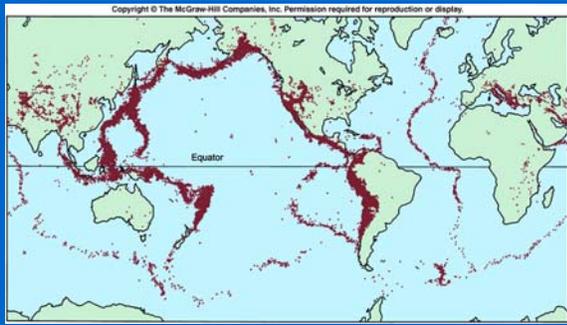
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## Epicenters of Earthquakes



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	<b>Terrain Models</b>
	<b>Network</b> <ul style="list-style-type: none"><li>• Street center lines</li><li>• Drainage network</li></ul>
	<b>Utilities</b> <ul style="list-style-type: none"><li>• Sanitary sewer lines</li><li>• Water lines</li><li>• Telephone</li><li>• Gas/Electric</li></ul>
	<b>Lots/Ownership</b> <ul style="list-style-type: none"><li>• Lot lines</li><li>• Property lines</li></ul>
	<b>Zones/Districts</b> <ul style="list-style-type: none"><li>• Comprehensive plan</li><li>• Municipal zoning</li><li>• Voting precincts</li><li>• School districts</li><li>• Census tracts/blocks</li></ul>
	<b>Base Mapping</b> <ul style="list-style-type: none"><li>• Road pavement</li><li>• Buildings/structures</li><li>• Fences/parking lots</li><li>• Drainage</li><li>• Wooded areas</li><li>• Spot elevation</li><li>• Contour lines</li><li>• Recreational facilities</li></ul>

**GIS**

Analyzes Earth as Layers of Information

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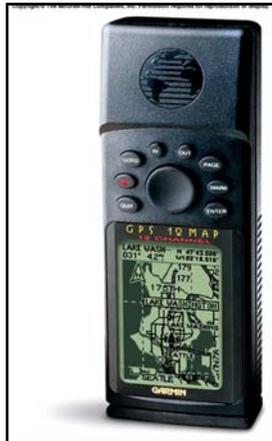
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## Global Positioning System

Initially developed by military

Now widespread

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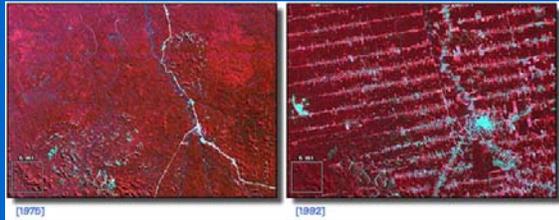
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## Brazilian Rainforest Deforestation

False color infrared



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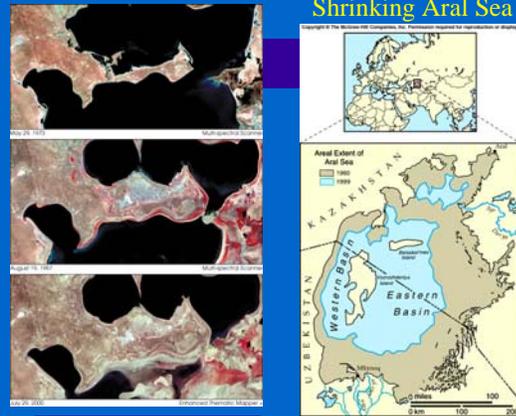
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## Shrinking Aral Sea



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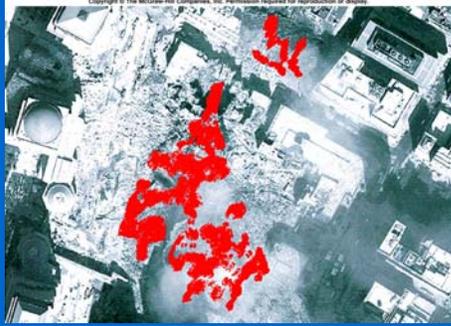
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Thermal Radiation Image of WTC, 9/2001



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Maps are powerful tools

If a picture is worth a thousand words, then a map is worth ten thousand words.

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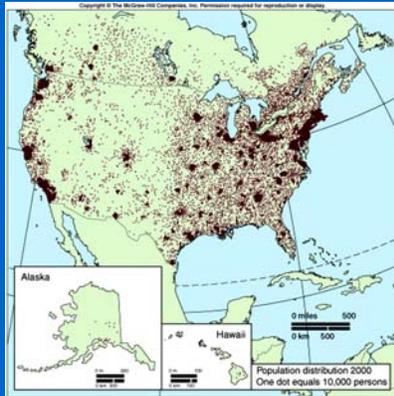
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Thematic  
Dot Map

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## Maps can be fun: Cartogram



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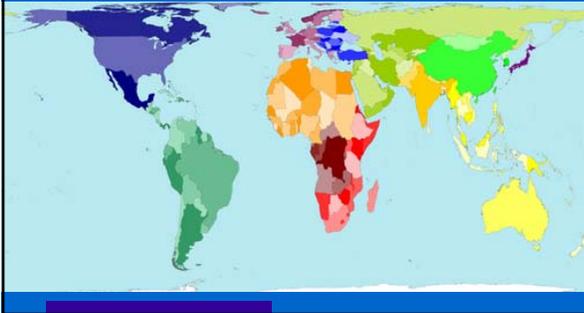
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## worldmapper.org



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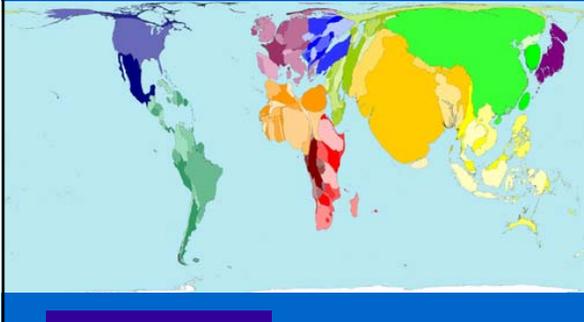
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## Population



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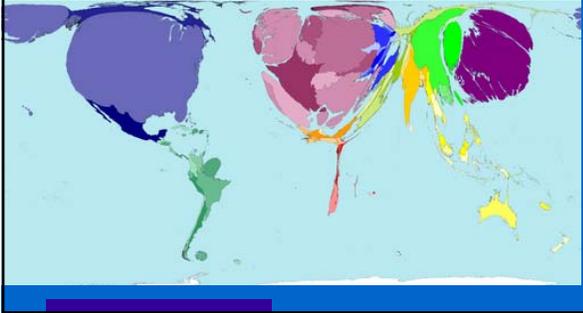
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### National Income



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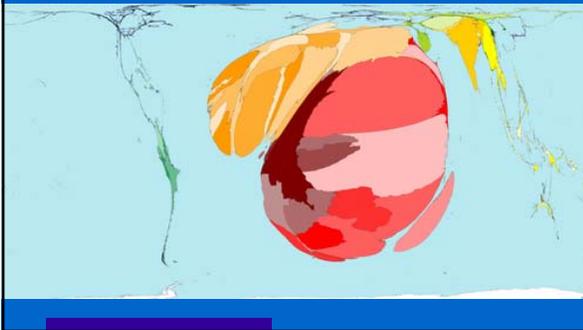
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### Malaria Deaths



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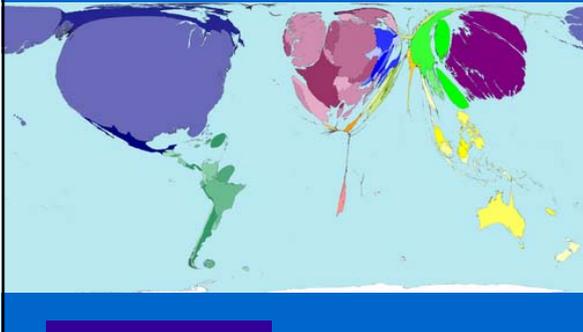
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### McDonalds Fast Food



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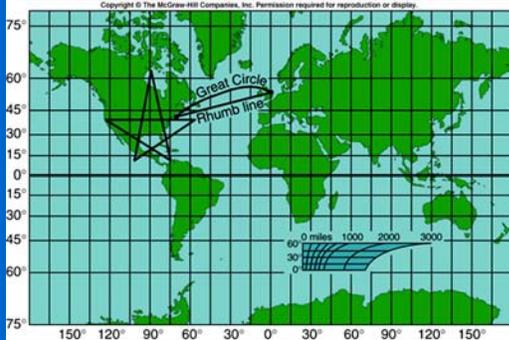
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## Beware of Mercator Projection



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## Toponyms

- Another expression of location to be explored in the classroom
- Also known as place-names
- Names also provide clues to culture

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## Place names

- Ethnic origins
  - French and Spanish names in Louisiana
  - Dutch names in South Africa
- Political Change
  - Russia: St. Petersburg to Leningrad to St. Petersburg
  - US: German-based names changed in WW I
- Commemorate National Leaders
  - Washington
    - Name of state, national capitol, 31 counties
  - MLK
    - Over 890 cities have streets named for King; Over 110 public schools

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## Location/Place Name Exercise

- Turn students into map-makers—best way to learn locations
- How many cities named Greenville in US?
  - <http://geonames.usgs.gov/pls/gnispublic/>
  - Twenty
  - Compare climate, population, and economics in one Greenville versus another
  - Leads to discussion of how location affects way of life and how people live

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## Theme of Place

- Traditionally studied as collection of cultural and physical characteristics
- Physical characteristics
  - Climate, soil, water, wildlife, etc.
- Cultural characteristics
  - Human imprint or impact on a place
  - Built environment—buildings, roads, etc.

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## Bigger questions related to place

1. How are places different from each other?
2. How are places similar to each other?
3. What factors explain these similarities and differences? (processes)
  - Photographs helpful in exploring places in classroom

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## Suburbs in 3<sup>rd</sup> World



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## Crowded Bangladesh



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## New York Blackout--2003



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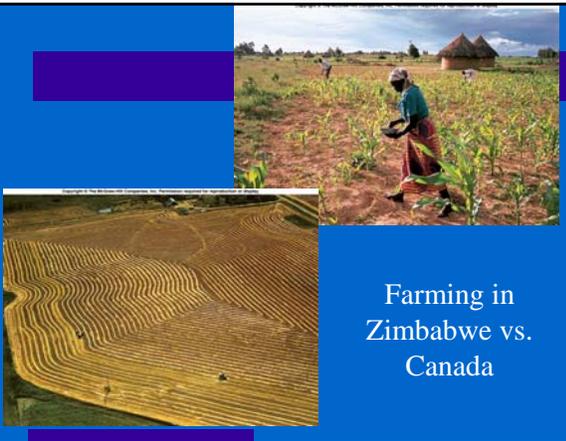
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Farming in Zimbabwe vs. Canada

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19<sup>th</sup> Century Paris



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Sense of Place and Mental Maps

- Place is not just set of objective facts
- Sense of Place
  - The subjective, psychological attachment to place
- Mental maps
  - How we perceive the physical arrangement of places
  - How we feel about or value places

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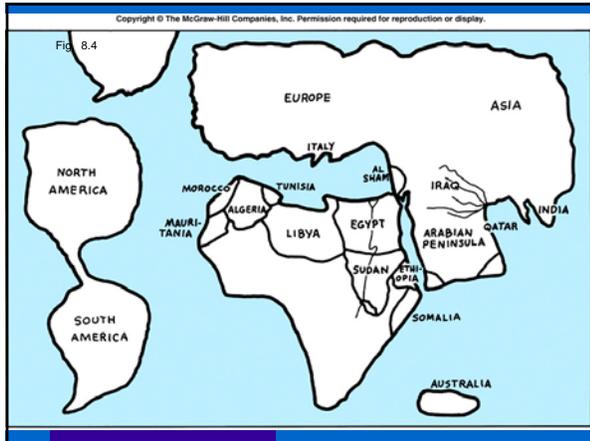
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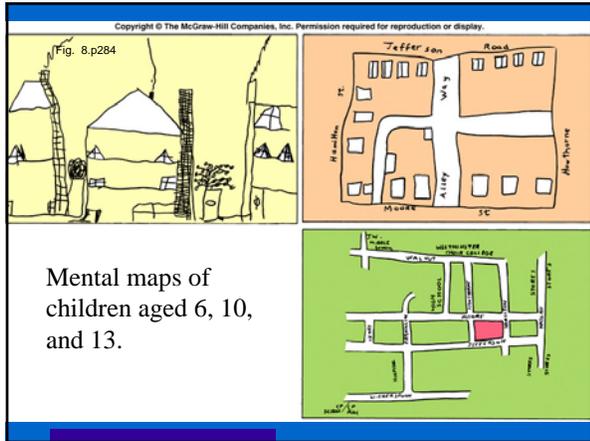
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## Mental Map Exercise

- Ask students to draw map of a place (school, neighborhood, state, country, etc.)
  - Assess their voids in geographic knowledge
  - How do these maps vary by student and why?
  
- Ask students to tell you what places they love or fear and why
  - Topophobia
  - Topophilia
  - People's descriptions of a place reveal their values, attitudes, and perceptions

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## What shapes our mental maps?

- Education
- Mass Media (from news to movies)
- Income/Social Class
- Personal Prejudice/Social Experience
- Travel/tourism

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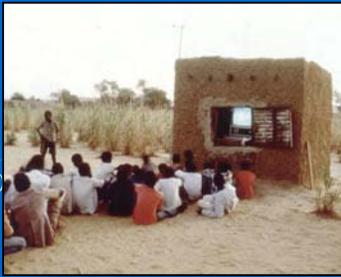
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## Theme of Movement

Geographers study movement of:

- Goods (exports/imports, trade)
- Ideas (fads, fashion information, media)
- People (tourism, migration, commuting)



Watching solar powered TV in Niger

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## Bigger Questions Related to Movement

- How does the movement of people and things alter places and change lives?
- What factors shape patterns of movement?
- How is the movement of people and things open to debate?

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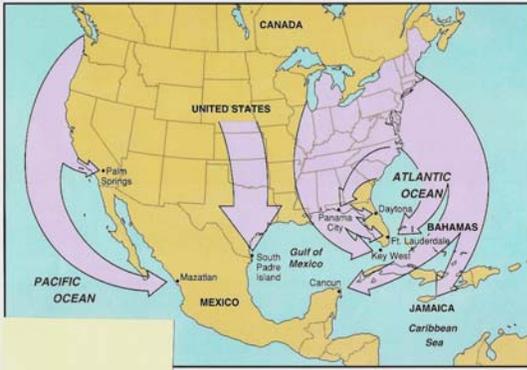
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## Voluntary Movement



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## Involuntary Movement



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## Contested Movement



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## Why Do People Migrate?

- Result of push and pull factors
- Push factors: conditions or perceptions that induce people to move away from their home or origin (usually negative)
- Pull factors: conditions or perceptions that tend to attract people to a destination (usually positive)

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## Cultural Diffusion

- Cultural ideas spread from an origin
  - Chinese fortune cookie is actually Japanese
  - Chewing gum originates with Native Americans
- Cultural ideas spread in distinctive patterns
  - Contagious (Rumor or Fad)
  - Hierarchical (Fashion & Technology)
  - Reverse-hierarchical (Wal-Mart)

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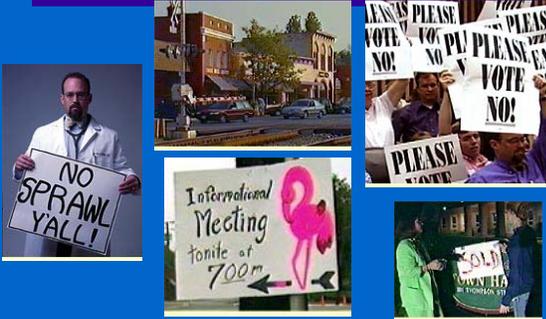
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## Store Wars---Ashland, VA



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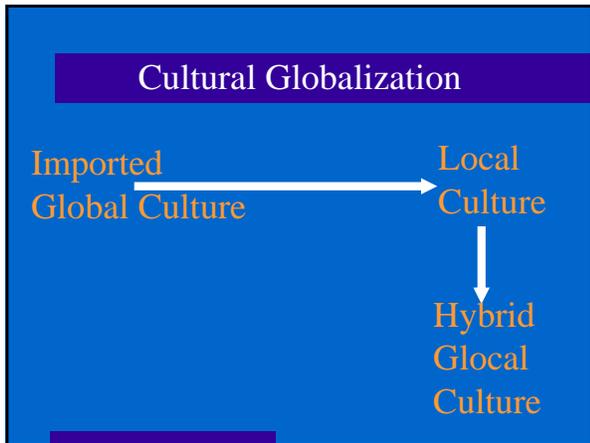
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**Glocalization** *adapting global imported culture to local cultures – a hybrid mixture of global and local*

Spider-Man gets glocalised (or 'transcreated')

	Spider-Man USA	Spider-Man India
<b>Secret identity</b>	Peter Parker	Pavitr Prabhakar
<b>Girlfriend</b>	Mary Jane Watson	Meera Jain
<b>Family members</b>	Aunt May and Uncle Ben	Bhim and Maya
<b>Backdrop</b>	New York	Mumbai
<b>Origin of powers</b>	Bitten by a radioactive spider at a science fair	Visited by a mystic being
<b>Arch enemy</b>	A mad, powerful businessman dressed in a goblin suit and calling himself 'The Green Goblin'	An demon from ancient Indian myth that looks like a green goblin



Spider-Man India wearing the ghobi, a loincloth worn by Hindu men in India. ©2004 Marvel Characters, Inc.

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**Global spread of culture can be controversial**

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## Movement Exercise

- Students interview different relatives about their migration histories (where they moved to and from and why)
- Students record and map origin of products found at home (food, clothing)
- Students write letter to a friend describing their hometown as if the automobile had never been invented

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## Theme of Human-Environment Interaction

- How the environment influences human activities
- How humans depend on the environment
- How humans modify the environment
- How humans adapt to the environment

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## Bigger Questions Related to Human-Environment Interaction

- How is human-environmental interaction a complex cycle rather than one way relationship?
- How does the human-environmental interaction have intended and unintended consequences?
- How can we make the human-environmental interaction sustainable?

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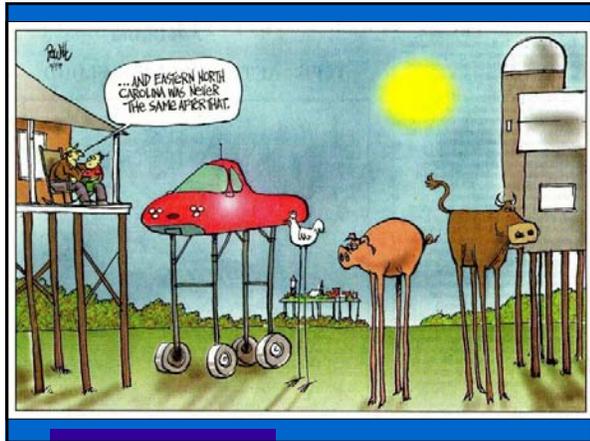
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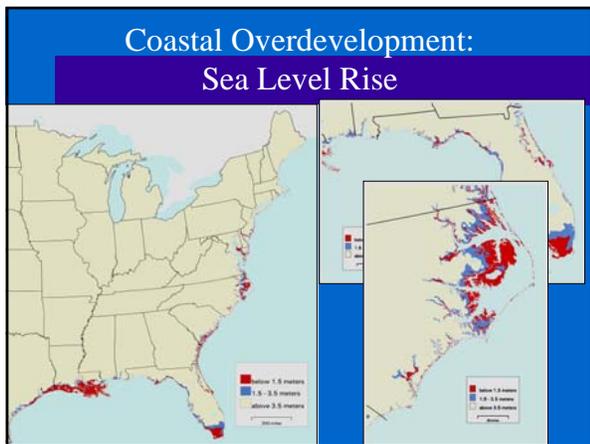
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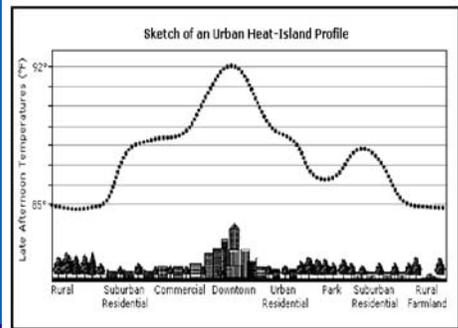
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## Urban heat island



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## Nonrenewable vs. Renewable Resources



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## Soil Erosion



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## Coastal Erosion



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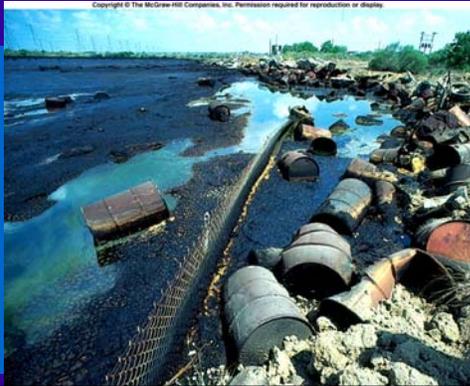
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## Fig. 17 Petrochemical Pollution in Texas City, TX



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## Tires and Mosquitoes



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## Big Issue: Invasive Species



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## The Role of Humans



Nutria in Louisiana

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## Human-Environment Exercise

- Streets Education ([www.streetseducation.org](http://www.streetseducation.org))
- Students participate in activities to improve livability of streets
- Livability includes environmental impacts, alternative transportation, safety, etc.
- Student calculate AVO (Average Vehicle Occupancy) of street near school or home

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## Regions

- Basic building blocks in geography
- Regions do not occur naturally but created by humans—sometimes arbitrary creations
- Types of regions:
  - Formal
  - Functional
  - Fiat
  - Perceptual

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## Formal Regions

- Defined by homogeneity or sameness of a characteristic
- Based on similar human or physical characteristic
- Ex: Region of French Speakers

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## Formal Region: Appalachia



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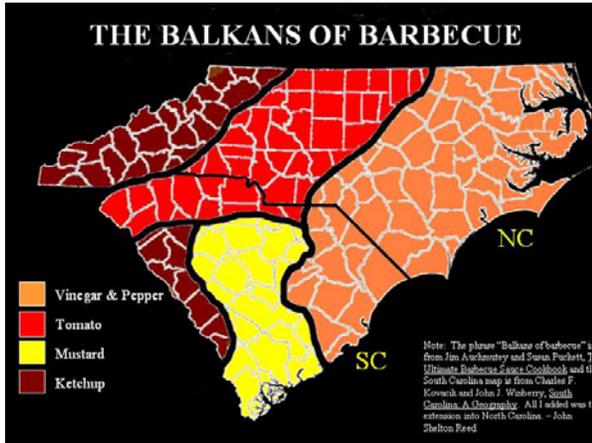
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### What do you call a generic soft drink?

- Coke
- Soda
- Pop
- Other

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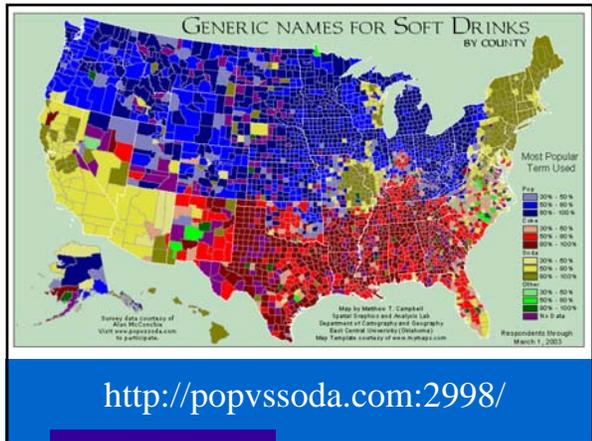
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<http://popvssoda.com:2998/>

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## Functional Region

- Defined by interactions or connections with other places
- Things usually flow into or out of a central node
- Node can be bank, grocery store, smokestack

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## Functional Region: Commuting Fields



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## Fiat region

- Region defined by political decision or process
- Boundaries equal to political boundaries
- Varies
  - USA
  - State of NC
  - Pitt County
  - 3<sup>rd</sup> voting District

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## Perceptual Region

- Regions as they exist in our heads
- How we identify ourselves regionally through our activities
- Also how we classify or group others (stereotype)
  - Third World
  - Developing World
  - Muslim World

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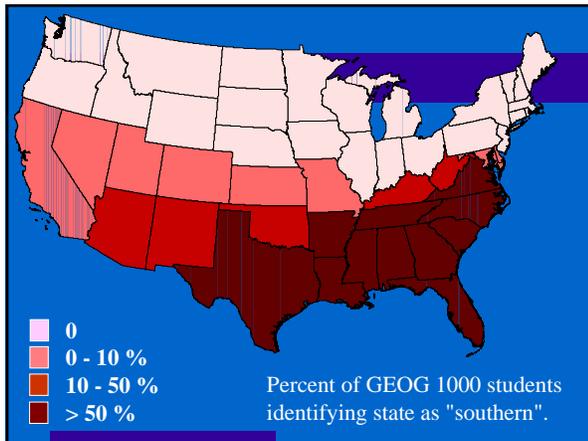
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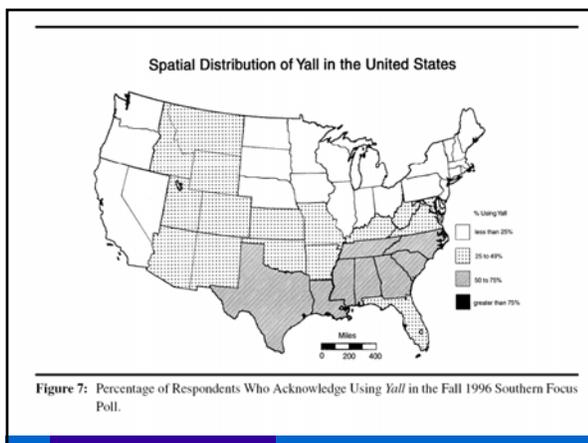
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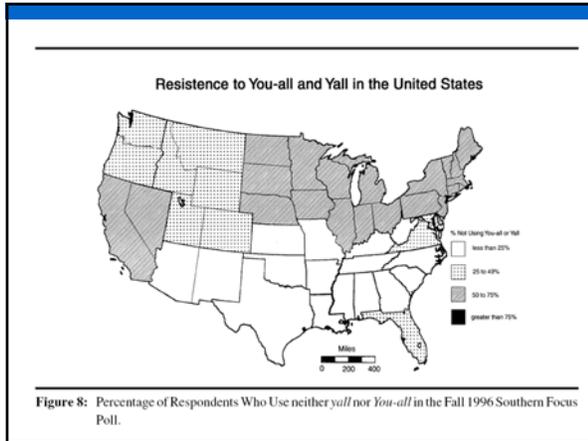
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**Bigger questions related to regions**

- What role does scale play in people's lives?
- How are we part of different geographic levels of activities?
- How do our lives operate simultaneously at different scales--local, national, and global?
- How are we part of a world in which regional boundaries are constantly changing?

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**Region Exercise**

- Sports geography
- Study of the origin and distribution of players on sports teams as way of measuring shifting scale of human activities and culture
- Record, tabulate, and map geographic origin of:
  - NASCAR drivers (How has a southern sport become more national?)
  - NHL Hockey (How has a Canadian sport become more global?)
  - Examine team rosters for different time periods to measure regional change over time

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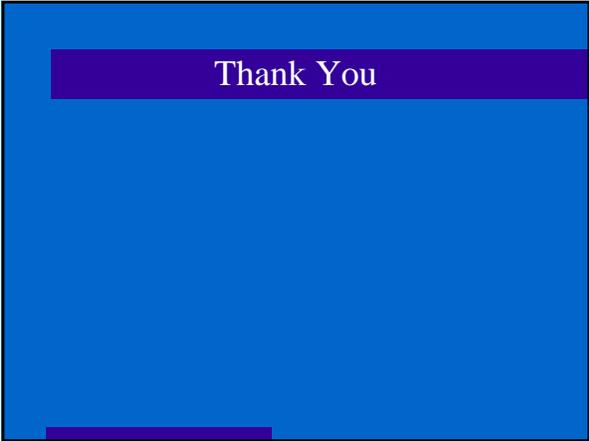
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Thank You

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