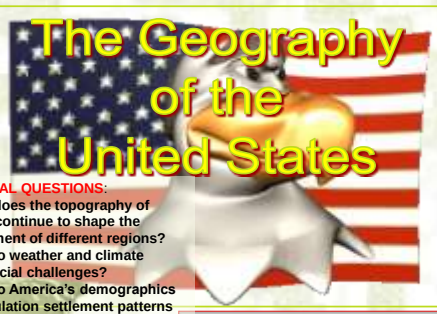
The Geography of the United States



ESSENTIAL QUESTIONS:

1) How does the topography of the U.S. continue to shape the development of different regions?
2) How do weather and climate pose special challenges?
3) How do America's demographics and population settlement patterns compare to the rest of the world?
4) How does the American landscape shape U.S. land use and U.S. economics?

By: Mr. Cegielski

US Geography Basics

- Third largest country in the world.
  - Half the size of Russia.
  - One third the size of Africa.
  - Half the size of South America.
  - 2 ½ times the size of Western Europe.

North America's Size

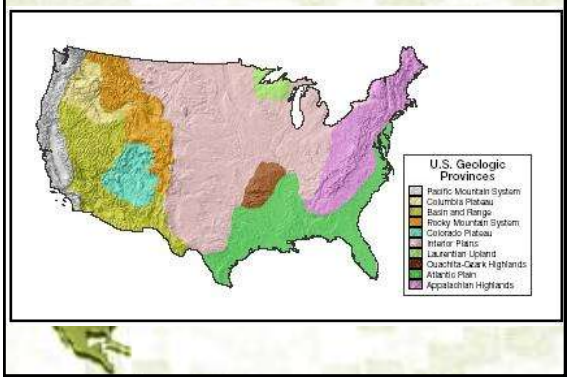
- 4.8% of the earth's surface
- 3rd largest continent
- 4th largest in population

Topography

Topography of the US

Satellite View

Warm Up: Can you label the following landforms?
Use a dictionary if necessary!



Topography of the Northeast

New York, New York!

New York's Canals

Erie Canal

Boston: The Hotbed of Revolution

Philadelphia: The Birth of Liberty

A New England Fall

Kancamagus Highway, Maine

The back roads of Vermont

Covered Bridge over the Connecticut River

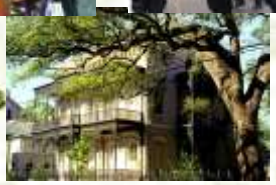
North-South Divide: The Mason-Dixon Line

Charles Mason & Jeremiah Dixon: 1763-1767

Topography of the Southeast

Charleston, SC: The South's First Port

New Orleans, LA: The Big Easy



Topography of the Midwest

Chicago Skyline: The "Second" City

The Great Plains

Topography of the West

Los Angeles: The City of Angels?

Hollywood: City of Lost Dreams

Unique features

- Highest peak is Denali, Alaska

- Rugby, North Dakota center point of North America

Bodies of water

- Columbia River
- Colorado River
- Rio Grande
- Missouri River - longes
- Mississippi River
- Ohio River

Missouri/Mississippi River is 3,879 miles long

Rivers

The Mississippi: America's Great River Road

- The "Big Muddy".
- 2,350 miles.
- Draining all or part of 31 states & 2 Canadian provinces.
- Covers 40% of the U. S.

Mississippi River

- The Mississippi River is the second longest river in the United States with a length of 2,340 miles. The river is an important transportation route from the grain producing states of middle America to the Gulf of Mexico.

Mississippi Riverboat

Great Mississippi Flood, 1993

St. Louis, MO before the flood

St. Louis, MO during the flood

St. Louis, MO after the flood

St. Lawrence River

- The St. Lawrence River connects the Great Lakes to the Atlantic Ocean. The river has a system of locks that allow large ships to transport loads of minerals and goods. Part of the river serves as the boarder between Canada and the United States.

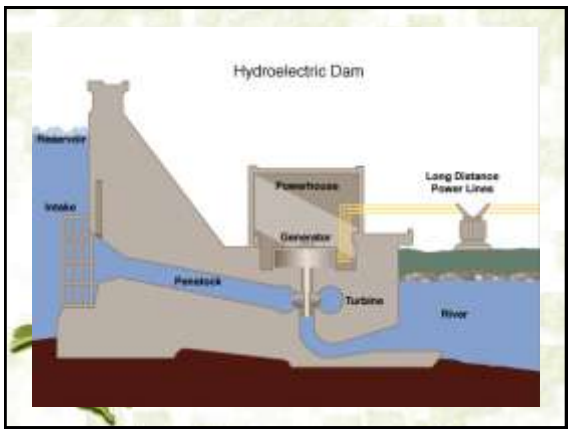
Colorado River

- The Colorado River flows from Colorado to the Gulf of California. The river formed the Grand Canyon by erosion and it is an important source of fresh water in an arid region. The Hoover Dam on the river provides electricity for Los Angeles.

Columbia River

- The Columbia River is the fourth largest river in the U.S. and the largest river in the Pacific Northwest. The river has many dams that are used to create hydroelectric power. The dams have impacted the local salmon industry.


ALBERTA
MONTANA
IDAHO
OREGON
NEVADA
UTAH


Hydroelectric Dam
Reservoir
Intake
Powerhouse
Long Distance
Power Lines
Generator
Penstock
Turbine
River

Other Water Features

- Some other important water features are:

A. Gulf of Mexico
B. Great Lakes
C. Arctic Ocean
D. Pacific Ocean
E. Atlantic Ocean
F. Hudson Bay

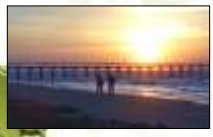
Bodies of Water

Great Salt Lake

- 2000 square miles.
- 10' – 28' deep.
- 6 times saltier than the oceans.

Lake Okeechobee, FL

The Gulf of Mexico



Map 1: Coastal and Navigable River Counties

Map Activity:

Label these Water Features	Great Lakes	Rivers
Gulf of Mexico	Lake Erie	Mississippi River
Chesapeake Bay	Lake Huron	Missouri River
San Francisco Bay	Lake Michigan	Ohio River
Puget Sound	Lake Ontario	Colorado River
Great Salt Lake	Lake Superior	Hudson River
Niagara Falls		Columbia River
		Potomac River
		Rio Grande River
		Tennessee River

Label these Mountains	Label these Mountain Peaks
Rocky Mountains	Mt. McKinley
Appalachians Mountains	Mt. Ranier
Highlands and Piedmont	Mt. Whitney
Sierra Nevada	
Cascades	
Adirondack	
Ozarks	
Pacific Coast Ranges	
Intermountain Range and Basin	

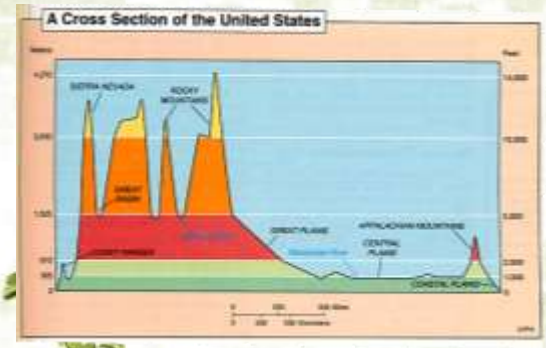
Rivers – Some answers

Landforms

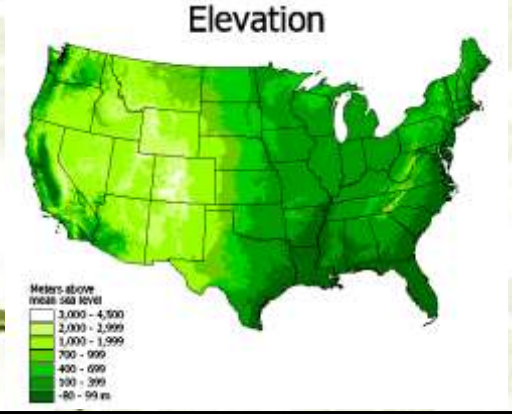
- The U.S. and Canada have several major mountain ranges:

A. The Rocky Mountains
B. The Appalachian Mountains
C. Pacific Coastal Ranges

The Contour of the US



Elevation



The Rocky Mountains

- The Rocky Mountains extend about 3,000 miles from Alaska south to New Mexico. They are younger and taller than the Appalachian Mountains. The Continental Divide is the line of highest points in the Rockies that marks the separation of rivers flowing eastward and westward.

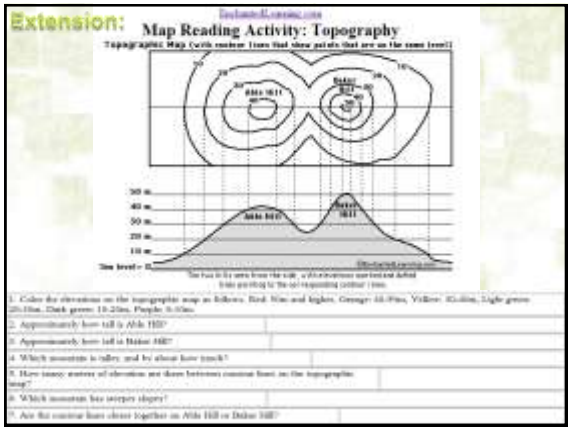
The Appalachian Mountains

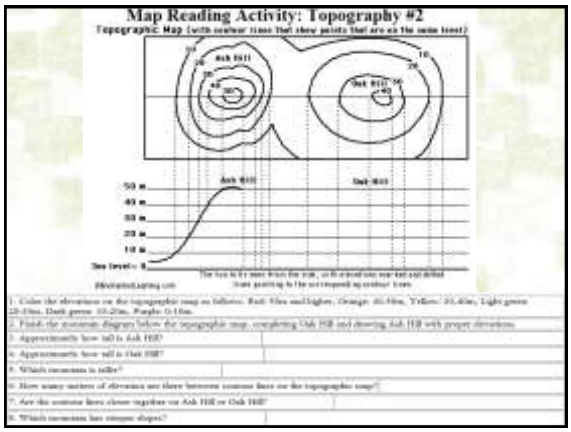
- The Appalachian Mountains extend about 1,600 miles north to south from Newfoundland in Canada to Alabama.

Pacific Coastal Ranges

A series of small mountain ranges stretch from southern California to Washington. These ranges are low in elevation and right on the coast. They make the coastline rugged and steep. This area is also on the Ring of Fire and has many active and dormant volcanoes. Earthquakes are common in this area.

Mountains & Plateaus – Some Answers





Other Landforms

A. The Canadian Shield
B. Interior Lowlands
C. Atlantic and Gulf Coastal Plains
D. Basin and Range
E. Great Plains
F. Grand Canyon

Canadian Shield

- The Canadian Shield is a rocky, mainly flat area around Hudson Bay.

Interior Lowlands

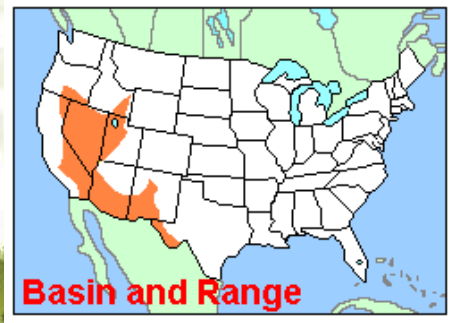
- An area that spreads from the Appalachian Mountains to the Mississippi River. This area is mostly flat with rolling hills.

Arctic and Gulf Coastal Plains

- These are flat areas that stretch along the Gulf of Mexico in the south and the Arctic Ocean in the north. The Arctic Coastal Plain is tundra.

Basin and Range

- This area is mostly in Nevada and it consists of rocky outcroppings of rock and large depressions.



Great Plains

- A largely treeless flat area that extends from Canada down to Mexico. The soil is very fertile and good for farming but the climate can be harsh with cold winters and hot summers. This area also gets many tornadoes.

The Continental Divide

Grand Canyon

- The Grand Canyon was formed by water erosion from the Colorado River. The canyon is 277 miles long and ranges in width from 4 to 18 miles. Most of the canyon is in Grand Canyon National Park in Arizona.
- See the Grand Canyon skywalk at youtube!

Grand Canyon

TOPOGRAPHY ASSIGNMENTS: PLAN A TRIP TO THE GRAND CANYON, THEN TO MARS!

Directions- Complete the following:

1) **The National Geographic lesson "Layers of the Grand Canyon" at the website** http://www.nationalgeographic.com/xpeditions/lessons/07/g912/canyon912.html
2) **The National Geographic lesson "The Technology of the Mars exploration" at** http://www.nationalgeographic.com/xpeditions/lessons/01/g912/marstech.html
3) **Compare/Contrast Essay Writing Prompt: The year is 2065. Humans have developed the capability to travel throughout the solar system! You are now grandparents who are planning to take your grandchildren to two destinations for the first time: 1) The Grand Canyon and 2) Mars! You will write a 300-word essay, in which you compare/contrast the topography and climate of earth's Grand Canyon to Mars! Provide travelling tips to your grandchildren and get them excited about exploring the physical terrain in these two locations! Use what you learned from the National Geographic lessons to include facts and details in your essay! Get creative; this is the future, after all!**

Mars, 2001, with the southern polar ice cap visible on the bottom.

Looking down Bright Angel trail to the Grand Canyon. The green area is Indian Gardens and the trail continues to Phantom Ranch at the river where a suspension bridge allows access to the North Rim.

View from the South Rim.

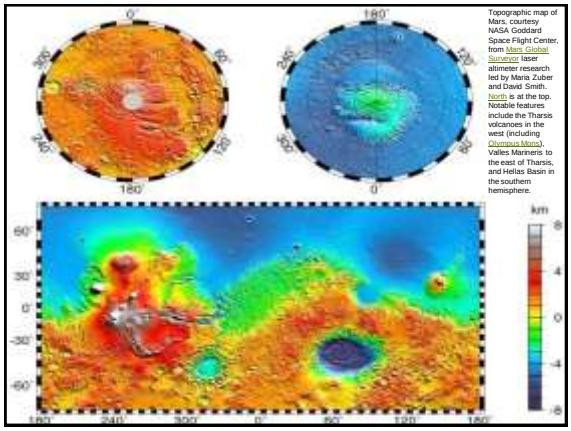

A view of the Colorado River flowing through the Grand Canyon.


The Grand Canyon, as seen from an airplane.

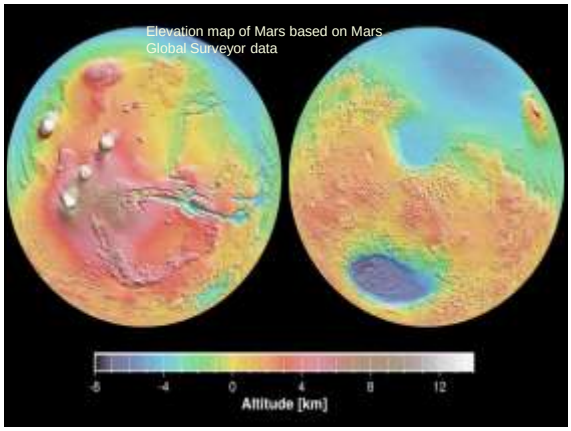

Eagle Rock (located at Eagle Point) on the west rim, aptly named for its shape, is considered sacred by the Hualapai Indians.


Mars or the Grand Canyon?

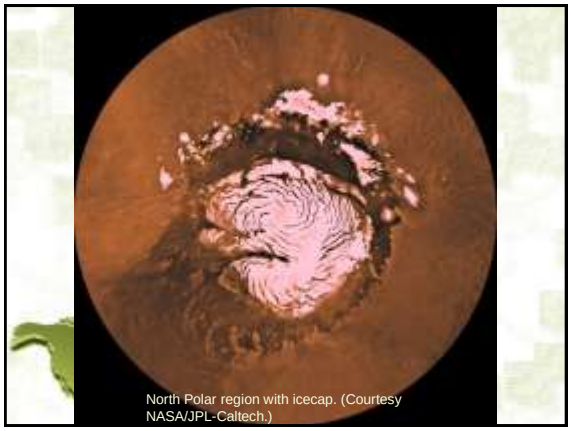

Which planet is Earth?
Which is Mars?



Topographic map of Mars, courtesy NASA Goddard Space Flight Center, from Mars Global Surveyor laser altimeter research led by Maria Zuber and David Smith. North is at the top. Notable features include the Tharsis volcanoes in the west (including Olympus Mons), Valles Marineris to the east of Tharsis, and Hellas Basin in the southern hemisphere.



Elevation map of Mars based on Mars Global Surveyor data



North Polar region with icecap. (Courtesy NASA/JPL-Caltech.)

Plains

The Great Plains

Introductory Activity on the Great Plains:

- **Directions: Analyze this song: [Note: The folk song below appeared in a lesson developed by Jim Kract of Texas A&M University, "Perceptions of the Great Plains in 19th Century Folk Songs—Teaching About Place."]**

- **Dakota Land**
- **Refrain:**
  O Dakota Land, sweet Dakota land,
  As on thy fiery soil I stand,
  I look across the plains,
  And wonder why it never rains,
  Till Gabriel blows his trumpet sound
  And says the rain's just gone around.
- ***We've reached the land of desert sweet,***
  Where nothing grows for man to eat.
  The wind it blows with feverish heat
  Across the plains so hard to beat.
- ***We've reached the land of hills and stones***
  Where all is strewn with buffalo bones.
  O buffalo bones, bleached buffalo bones,
  I seem to hear your sighs and moans.
- ***We have no wheat, we have no oats,***
  We have no corn to feed our shoats;
  Our chickens are so very poor
  They beg for crumbs outside the door.
- ***Our horses are of bronco race;***
  Starvation stares them in the face.
  We do not live, we only stay;
  We are too poor to get away.

Write down five words describing the physical environment from the song. Speculate on measures that enabled humans to adapt to this environment. Then, form small groups to share your findings.

Mini-Activity on the Great Plains continued…

- Now, in your small groups, go to the following websites:
- The Dust Bowl
  UN: ReliefWeb
  University of Colorado Natural Hazard Center
- Compile a list of technological developments that enabled humans to respond to the demands and constraints of the physical environment of the Great Plains. Formulate generalizations about how technological developments facilitated settlement of the Great Plains.
- Next, prepare for a simulation of life on plains during the 19th Century!

- Adapted from the National Geographic lesson "**The Great Plains: A Harsh Welcome to Settlers**" at the website http://www.nationalgeographic.com/xpeditions/lessons/15/g912/greatplains.html

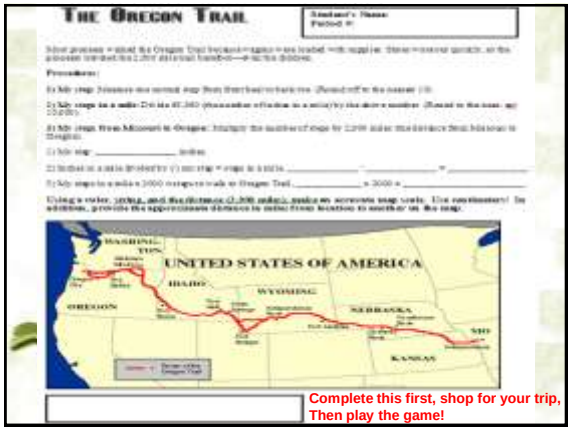
Migration in Action: Mr. C's Oregon Trail Game

Introduction: Today, we will simulate what it was like for early American settlers to migrate along the Oregon Trail along the Great Plains! Here's a little history before we start playing!

- The Oregon Trail was one of the main migration routes in North America for wagons in order to settle new parts of the United States of America during the 19th century.
- The five to six month journey spanned over half the continent as the wagon trail proceeded 2,170 miles (3,500 kilometers) west through territories and land later to become six U.S. states (Missouri, Kansas, Nebraska, Wyoming, Idaho, and Oregon).
- Between 1841 and 1869, the Oregon Trail was used by settlers migrating to the Pacific Northwest of what is now the United States. Once the first transcontinental railroad was completed in 1869, the use of this trail by long distance travelers diminished as the railroad slowly replaced it.

Objective: Learn about Human movement by studying and reliving the Oregon Trail!

- **Sit in Groups of 3-4. You must complete and submit the following today from your packet:**
- **1) "Practicing Map Skills" worksheet**
- **2) "The Oregon Trail" worksheet.**
- **3) "Go Shopping!" worksheet. You have a maximum budget of $500 to plan for your family's journey on the Oregon Trail, so make wise decisions. Your decisions will ultimately determine whether your family survives the journey!**
- **4) Two travel logs! In other words, I want your group to complete the game twice today and record your adventures on the travel logs. I have extra copies!**
  - **Make sure to staple all work together to turn in today!**



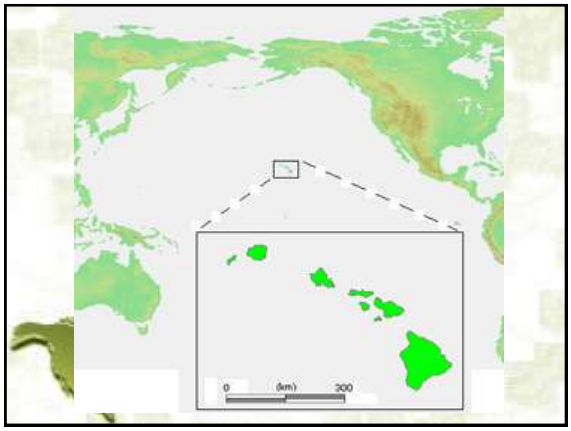
Complete this first, shop for your trip, Then play the game!

U.S. Topography and Physical Geography continued...

Groups of Islands

A. Hawaiian archipelago - A group of 19 islands and islets in the Pacific Ocean that formed over a hotspot in the earth's crust. The largest island, Hawaii, has an active volcano.

B. Aleutian Islands - A chain of over 300 small volcanic islands that extend from Alaska to Russia.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nationalatlas.gov
HAWAII
PACIFIC OCEAN


Sea of Okhotsk
KAMCHATKA
Date Line
ALASKA
Bering Sea
AITU
SHEMYA
DUTCH HARBOR
Aleutian Islands
AGATTU
KISKA
AMCHITKA
ADAK
Pacific Ocean

Plateaus

Cumberland Plateau & 'Gap'

- AL, KY, TN, VA, WV
- 24,640 sq. mi.
- Natural passage [Gap] through the Cumberland Mts.

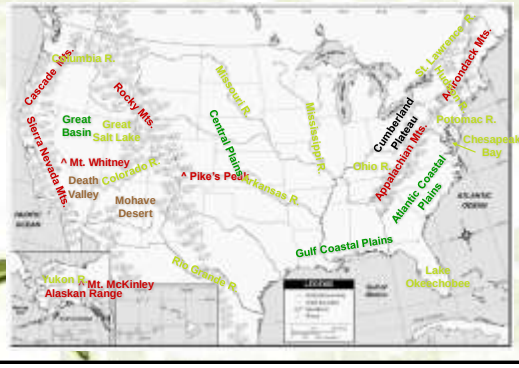
Deserts

Mohave Desert – 3,000'

Death Valley, CA

- 3.3 million acres.
- 95% wilderness.

Completed Map



The Geographic Diversity of America!

National Parks

US National Parks (1)

Glacier National Park, MT

Grand Teton National Park, WY

Mt. Rushmore
National Park, SD

US National Parks (2)

Everglades National Park, FL

Yellowstone National Park, MT

Grand Canyon
National Park, AZ

US National Parks (3)

Yosemite
National Park,
CA

Acadia National Park, ME

Natural Bridges
National Park, UT

WebQuest: Using animations to explain geo-physical processes

- **Directions**: This assignment will require you to analyze advanced animation of various geo-physical processes, including the formation of rivers, valleys, and glaciers as well as shifting plate tectonics (often resulting in earthquakes!).
  - 1) Go to: http://www.school-portal.co.uk/GroupHomepage.asp?GroupID=12426
  - 2) The following major topics are listed as links on the top left column :
  - Animated Coasts
  - Animated Rivers
  - Animated Glaciers
  - Animated Plate Tectonics
  - Animated Soils
  - 3) Answer the following questions for each topic in complete sentences:
  - **Animated coasts--Questions:**
  - 1. How do splits and salt marshes form?
  - 2. What does coast erosion create?
  - 3. How are the shapes of cliffs formed?
  - 4. How do winds shape coastal sand dunes?

- **Animated rivers—Questions:**
- 1. How do rivers transport "loads"?
- 2. How are v-shaped valleys and interlocking spurs formed?
- 3. How are gorges formed?
- 4. What are the features of floodplains?

- **Animated glaciers--Questions:**
- 1. How do glaciers flow?
- 2. Describe the movement of ice within large polar glaciers such as those in Antarctica or Greenland.

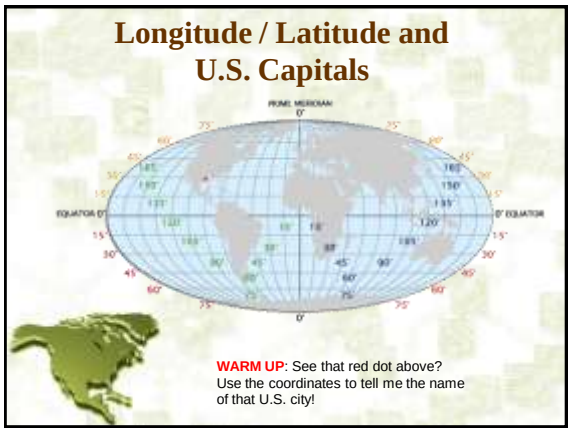
- **Animated plate tectonics—Questions:**
- 1. How can rift valleys eventually lead to the development of new oceans?
- 2. How do convectional currents in the mantle drive surface crustal plate movements?
- 3. Describe the formation of earthquakes and volcanic activity.
- 4. What happens when lava enters cold sea water?
- 5. Describe how island arcs, such as the Aleutian Islands or the Japanese islands, form where a subduction zone forms between two oceanic crustal plates.
- 6. How do collision zones occur when two continents meet at a destructive plate margin, leading to major mountain ranges such as the Himalayas.

- **Animated soil—Questions**
- 1. What is soil?

Regions	States
New England	ME, VT, NH, MA, RI, CT
Mid-Atlantic	NY, PA, NJ, DE, MD
South	WV, VA, NC, SC, GA, FL, KY, TN, AL, MS, LA, AR
Middle West	OH, IN, IL, WI, MI, IA, MO, KS, NE
Southwest	OK, TX, NM, AZ
Mountain States	MT, WY, ID, UT, CO, NV
West Coast	WA, OR, CA, HI, AK

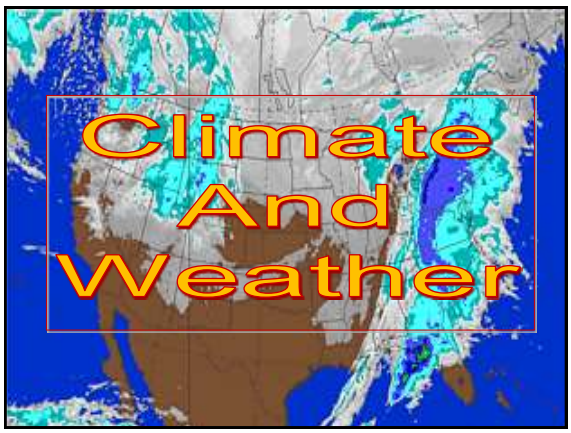
Regions	Well-known names
Mid-Atlantic	Gulf Coastal Plains, Atlantic Coastal Plains
South	Mason-Dixon Line, Bible Belt
Middle West	Rust Belt, Corn Belt, Midwest lowlands, Great Plains
Southwest	Sun Belt, Grand Canyon,
West Coast	San Andreas Fault, California aqueduct system, Mojave Desert, Death Valley,


States and Capitals
of the United States!


Longitude / Latitude and
U.S. Capitals
WARM UP: See that red dot above?
Use the coordinates to tell me the name
of that U.S. city!


Could you label
all of the U.S. Capitals?
USA Capitals
Let's play one of my PowerPoi
U.S. Capitals games first!


Label the fifty state capitals and our national capital


Climate
And
Weather

Warm Up: Can you track this hurricane using lines of longitude and latitude?

Track a hurricane (the symbol for a hurricane is) and the symbol for a tropical storm is) whose coordinates are:

- 10°N, 40°W – tropical storm
- 12°N, 45°W – tropical storm
- 15°N, 50°W – tropical storm
- 15°N, 55°W – tropical storm
- 15°N, 60°W – tropical storm
- 18°N, 65°W – hurricane
- 20°N, 70°W – hurricane
- 23°N, 75°W – hurricane
- 25°N, 80°W – hurricane
- 30°N, 82°W – hurricane

How are these Regions defined?

CLIMATE

- Canada and the United States are in the middle and high latitudes. The most common climates are:
  A. Humid Subtropical and Continental
  B. Semiarid and Arid
  C. Marine West Coast and Mediterranean
  D. Tundra and Icecap

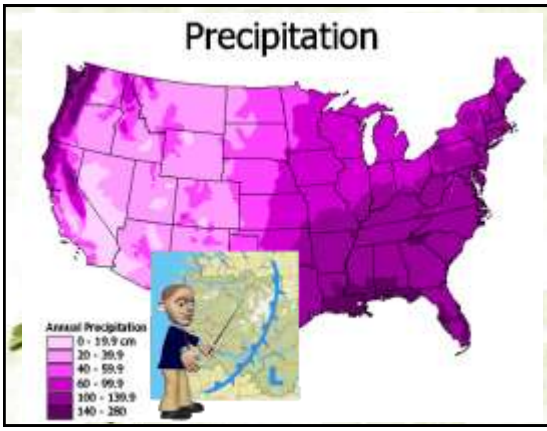
Climate

- Semiarid = Great Plains into the Southwest
- Arid = Southwest
- Marine West Coast = Coast of Oregon and Washington
- Mediterranean = Coast of Southern California
- Tundra = Northern Canada and Alaska
- Tropical Wet = Hawaii

Climate

- Most of the Eastern United States is humid subtropical. This climate zone has a mild winter and hot humid summers. The Northern states are humid continental. They have much colder winters but the summers can still be hot and uncomfortable.

Precipitation



Coniferous Forests

- Upper area of North America
- Pines, fir and spruce trees, produce cones which contains the seeds
- Tall mountains have supported tree growth
- Cold and stormy in the winter
- Lightening storms in the summer

Deciduous Forest

- They are found 0 - 50° degrees north latitude
- Former glaciers from New England to Indiana
- Moderate climate, 4 seasons and they get 2 - 4 feet of rain per year
- Trees are oaks, maples, beeches, hickories and ashes

Mediterranean Region

- Hot, dry summers, mild, wet winters
- Only found in 5 places on Earth
  - California, Northern Baja, California
  - Basin of the Mediterranean Sea
  - Southwestern Australia
  - Western cape of South Africa
  - Central Cost of Chile

Rainforest

- North America contains the largest continuous area of costal temperate rainforest in the world
- Oregon to Alaska
- 350 species of animals
- 25 tree species
- 55 inches of rainfall p/y

Grassland

- 2-35 inches of rainfall p/y
- Summer temperatures 100°F
- Winter temperatures 0°F

Tundra

- 55° to 70° North
- Tundra means barren land
- Ground is permanetly frozen 10" to 3 ft.
- Average temperature -18°F
- Summer the sun never sets
- Worlds' coldest/driest biome

Desert

- There four specific regions
  - Sonoran Desert found in California, Arizona and Mexico. Low elevation which makes it HOT
  - Mojave Desert – the smallest, but where Death Valley can reach 134°
  - Joshua Tree ▶

  - Chihuahuan Desert – found in Mexico, it gets 8-12 inches of rain per year

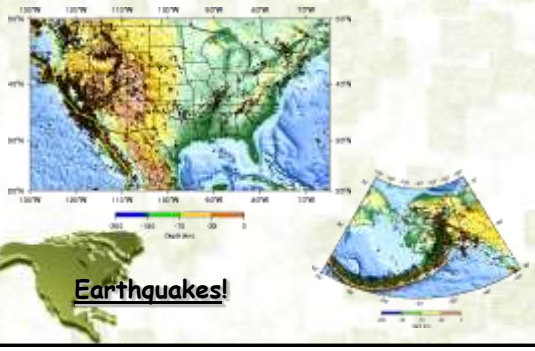
Century Plant ▶

  - Great Basin – Nevada with Mountain ranges over 10,000 feet, 4- 11 inches of snow a year

Climate

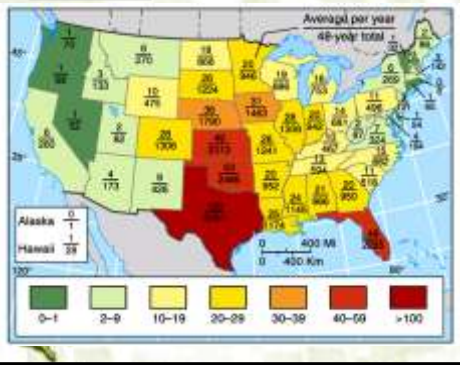
Geographic Problems

Seismography Data: 1977-1997



Earthquakes!

Tornadoes Per Year: 1950-1997

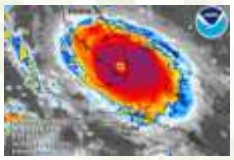


What are the climatic processes that contribute to "Tornado Alley?"

Hurricane Camille: The Storm of the Century

- August 17, 1969
- Category 5
- Killed 412 people

Andrew: The Most Expensive Hurricane



- August 24, 1992
- Category 5
- Killed 65 people
- Cost $30,000,000,000

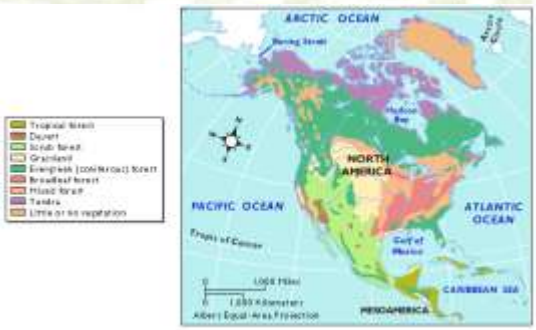
Assignments on U.S. Climate and Weather:

Complete the following:

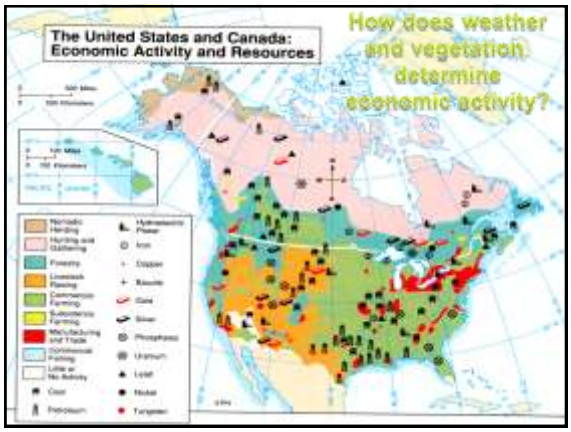
- 1) The National Geographic lesson "Twister Tracking" at the website http://www.nationalgeographic.com/xpeditions/lessons/01/g912/fontwister.html
- Alternative: "Tornadoes and Technology" at http://www.nationalgeographic.com/xpeditions/lessons/15/g912/tornadotech.html
- 2) Read "**KATRINA REFUGEES SHOOT UP HOUSTON"** and write the 150-word response as described. Then, prepare for a class discussion.

Vegetation

The American Landscape



US Wetlands



Assignment:

- Complete the National Geographic lesson "Weather and Agriculture" at http://www.nationalgeographic.com/xpeditions/lessons/08/g912/globalclimate.html
  - This will be fun, in which you will need to plot a location for your new agricultural business!

Demographics

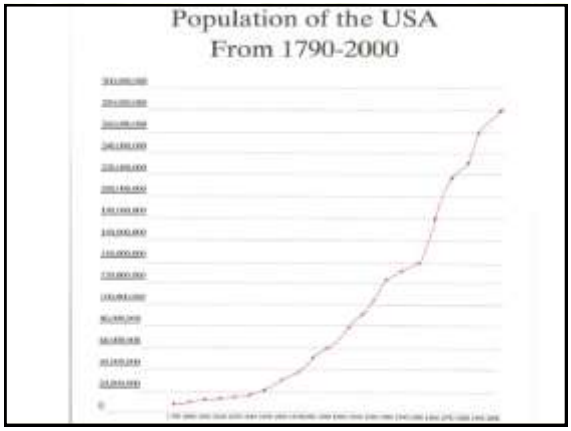
WHAT DOES "DEMOGRAPHICS" INCLUDE?

WARM UP ACTIVITY: Make a graph showing the population changes in the USA from 1790 to 2000.

Directions: Using this record from the USA census bureau , mark the graph.

- A. In 1770 there were 2,148,100 people
- B. In 1780 there were 2,780.400 people
- C. In 1790 there were 3,929,214 people
- D. In 1810 there were 7,239,881 people
- E. In 1820 there were 9,638,453 people
- F. In 1830 there were 12,866,020 people
- G. In 1840 there were 17,069,453 people
- H. In 1850 there were 23,191,876 people
- I. In 1860 there were 31,443,321 people
- J. In 1870 there were 38,558,371 people
- K. In 1890 there were 62,979,766 people
- L. In 1900 there were 76,212,168 people
- M. In 1910 there were 92,228,496 people
- N. In 1920 there were 106,021,537 people
- O. In 1930 there were 123,202,624 people
- P. In 1940 there were 132,164,569 people
- Q. In 1950 there were 151,325,798 people
- R. In 1960 there were 179,323,175 people
- S. In 1970 there were 203,211,926 people
- T. In 1980 there were 226,545,805 people
- U. In 1990 there were 248,709,873 people
- V. In 2000 there were 281,421, 906 people

Population of the USA From 1790-2000



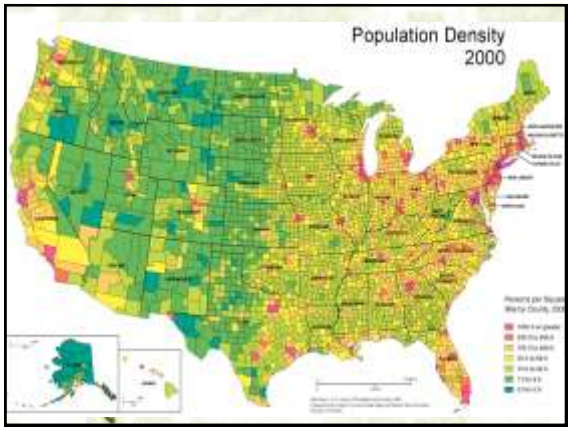
U. S. Population as of August 22, 2003

291,860,161

- **One birth every 8 seconds.**
- **One death every 13 seconds.**
- **One international migrant (net) every 22 seconds.**
- **Net gain of one person every 10 seconds.**

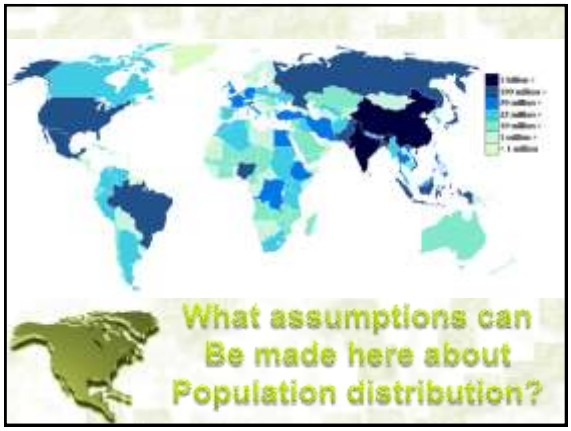
Population Distribution

- Population distribution refers to where people live around the world.
- In the United States most people live on the coasts or near major waterways. Population is not evenly distributed around the earth's surface.



Population Distribution

- The factors that influence population distribution are: natural resources, climate, economic development, government policy, rural/urban settlement, capital resources, and conflicts.



Population: Canada v. U.S.

- The population of Canada is clustered near the St. Lawrence River Valley in the East and on the Great Lakes. Most of Canada is sparsely populated due to the climate.
- The U.S. is densely populated on the East Coast. The northeast, From New York to Boston is growing into a megalopolis, or series of connected cities.

Population

- The population of the United States is extremely mobile. Nearly 3/4 of the U.S. population moves an average of once every 5 years.
  A. Shifts in the economy (Rust Belt, Silicon Valley)
  B. Doubling of the divorce rate in last 30 years
  C. Corporate transfers
  D. Change in status (marriage, graduation, retirement-Sun Belt)

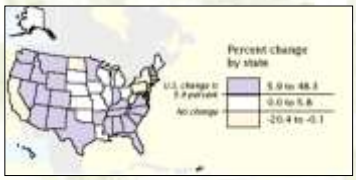
The United States: A Multicultural Society

- Although Canada and the U.S. were colonized by Europeans they have become multicultural societies through immigration. The U.S. also has a large African American population because of slavery.

Immigration to the U.S.

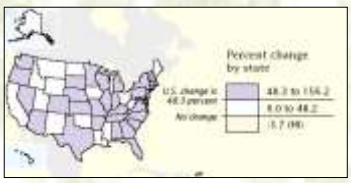
Year	Top 3 countries of origin
1880	Germany, Ireland, United Kingdom
1930	Italy, Germany, United Kingdom
1960	Italy, Germany, Canada
1980	Mexico, Germany, Canada
1990	Mexico, Philippines, Canada
2000	Mexico, China, Philippines

Racial Changes: Caucasians (1990-2000)



Racial Changes: African-Americans (1990-2000)

Racial Changes: Asians (1990-2000)



Racial Changes: Native-Americans (1990-2000)

Linguistic Map

Demographics: Key Terms

- **Demographics**- Study of population characteristics, including race, religion, gender and ethnicity.
- **Population**- How many people live in an area.
- **Population density-** How many people there are in a specific area (per square mile). Use the formula **Population density = Population/Land Area** to calculate population density.

Here's how population density works!

- 1) Compare a mansion compared to an apartment building. If they both take up the same amount of space, but the mansion has 5 people living there and the apartment building has 50 people living there, which has the greater population density?
- The apartment has a higher population density.
- 2) Which has a greater population density, New York or Texas? Why?

- Texas has a large population, but a small population density because the people are spread out. New York has a large population and a high population density, because most people live in apartment buildings.

Objective: Analyze Population Patterns in the U.S. and the World!

Today's work goals:

1) You will need a calculator and colors! Get in groups of 2-3. Using the blank maps of the U.S. and the website http://2010.census.gov/2010census/popmap/, create population maps of the U.S.

Tip: Divide up the work responsibilities by having each member compute the population densities for certain states. For example: "I'll take all states beginning with letters A-I!" Or, 'I'll do these states in the northeastern part of the U.S." Compare each other's data and work together to finish shading in the maps!

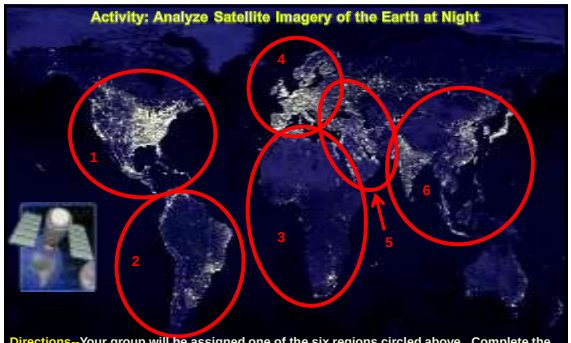
2) For each group, I will assign a specific region of the world to analyze population settlement patterns featured on the map of the "Earth at Night" (on the projection screen). Appoint a scribe to complete the four questions of this activity. Then, your group will present its findings to the class.

Directions:
Go to http://2010.census.gov/2010census/popmap/. Record the population of each state separately and then complete key and this map!

Directions:
Using your data collected from above to compute the population density of each state, create a color key and complete this map! What patterns can be seen in the distribution of population densities by state. What inferences can you make by observing the overall spatial distribution?

Use the formula **Population density = Population/ Land Area** to calculate population density.

Activity: Analyze Satellite Imagery of the Earth at Night



Directions--Your group will be assigned one of the six regions circled above . Complete the accompanying chart and answer the following questions:

1) Using an atlas, identify the 10 biggest/most populous cities in your region.
2) What do the concentrations of lights reveal to us about various areas of your region?
3) Why are some areas of your region dark/or less bright than others? Hypothesize!
4) Do this map accurately reveal population settlement patterns? Why or why not?

Analysis of Population Patterns on Map of the Earth at Night

	Location	Population Density	Patterns of Settlement	Why do these patterns exist?
1				
2				
3				
4				
5				
6				

Extension Assignment on Satellite Images:

- Complete the National Geographic lesson "**WHAT CAN WE LEARN FROM SATELLITE IMAGES?**" at the website http://www.nationalgeographic.com/xpeditions/lessons/03/g912/landuse.html

The United States And Canada Economic Geogr

Warm Up on U.S. Natural Resource Use:

- 1) List the ways you depend upon energy in your everyday lives. Identify those activities that are dependent upon fossil fuels (e.g., oil, coal, and natural gas). List answers on the board.
- 2) Next, think about and then discuss as a group the following questions:
  - Where do these energy resources come from?
  - How are our public lands connected to these resources?
  - What is meant by the term "alternative energy"?
  - What are some examples of alternative energy sources?
- 3) Do you know of any renewable sources of energy in your area (e.g., windmills, hydroelectric dams, and solar panels)?
  - Hint: The six most common renewable energy sources on the board or overhead (e.g., hydroelectric, geothermal, wind, biomass, tidal, and solar).

Natural Resources

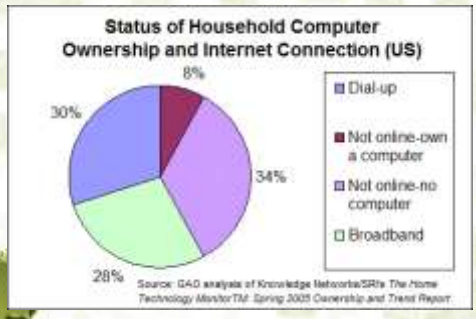
- The United States and Canada have a rich supply of mineral, energy, and forest resources.
- The U.S. has abundant supplies of coal, copper, lead, iron, natural gas, timber, bauxite, and uranium.
- 18% of the land in the U.S. is arable land.

Infrastructure

- The United States and Canada have highly developed infrastructures that include:

A. Modern road systems (interstates, freeways, bridges, tunnels)
B. Telecommunications systems (internet connections, phone systems)
C. Ports, railroads, educational systems

Click here to see maps of infrastructure!



Diversified Industries

- Since WWII the U.S. has made many technological advances that have helped it become the largest and most technologically powerful country in the world. These advances include:

A. The integrated circuit (computer chip)
B. Advanced jet engines
C. Nuclear technology

Diversified Industries

- Labor Force by Occupation in the U.S.
- 0.6% farming, forestry, fishing
- 22.6% manufacturing, extraction, transportation
- 35.5% managerial, professional, and technical
- 24.8% sales and office

U.S. Exports

- The U.S. is a major exporter of technology, consumer goods, information systems, and foodstuffs.

U.S. Agricultural Products

- Wheat, corn, other grains, fruits, vegetables, cotton
- Beef, pork, poultry, dairy products, fish

What kind of agriculture does the U.S. have?

Commercial Agriculture

- Mixed Crop and Livestock Farming
- Dairy Farming
- Grain Farming
- Livestock Ranching
- Mediterranean Agriculture
- Truck Farming

North Dakota Potato Farm

Mixed Crop and Livestock Farming

Mixed Crop and Livestock Farming

- **Where: Ohio to Dakotas, centered on Iowa; much of Europe from France to Russia**
- **crops: corn (most common), soybeans**
- **In U.S. 80% of product fed to pigs and cattle**

Highly inefficient use of natural resources

Pounds of grain to make 1 lb. beef: 10
Gallons of water to make 1 1b wheat: 25
Gallons of water to make 1 1b. beef: 2500

Livestock Ranching

Where: arid or semi-arid areas of western U.S., Argentina, Brazil, Uruguay, Spain and Portugal.

History: initially open range, now sedentary with transportation changes.

Environmental effects:

1) overgrazing has damaged much of the world's arid grasslands (< 1% of U.S. remain!)

2) destruction of the rainforest is motivated by Brazilian desires for fashionable cattle ranches

Dairy Farming

Where: near urban areas in N.E. United States, Southeast Canada, N.W. Europe

Locational Theory **butter and cheese more common than milk with increasing distance from cities and in West.**

- ***milkshed*: historically defined by spoilage threat; refrigerated trucks changed this.**

Dairy Farm, Wisconsin

Grain Farming

Where: worldwide, but U.S. and Russia predominant

Crops: wheat

- winter wheat: Kansas, Colorado, Oklahoma
- spring wheat: Dakotas, Montana, southern Canada

Highly mechanized: combines, worth hundreds of thousands of dollars, migrate northward in U.S., following the harvest.

Mediterranean Agriculture

Where: areas surrounding the Mediterranean, California, Oregon, Chile, South Africa, Australia

Climate has summer dry season. Landscape is mountainous.

- crops: olives, grapes, nuts, fruits and vegetables; winter wheat
- California: high quality land is being lost to suburbanization; initially offset by irrigation

Commercial Gardening and Fruit Farming

Where U.S. Southeast, New England, near cities around the world

- crops: high profit vegetables and fruits demanded by wealthy urban populations: apples, asparagus, cherries, lettuce, tomatoes, etc.
- mechanization: such as *truck farming* highly mechanized and labor costs are further reduced by the use of cheap immigrant (and illegal) labor.
- distribution: **situated near urban markets.**

Making Sense of the Map of US Agricultural Regions

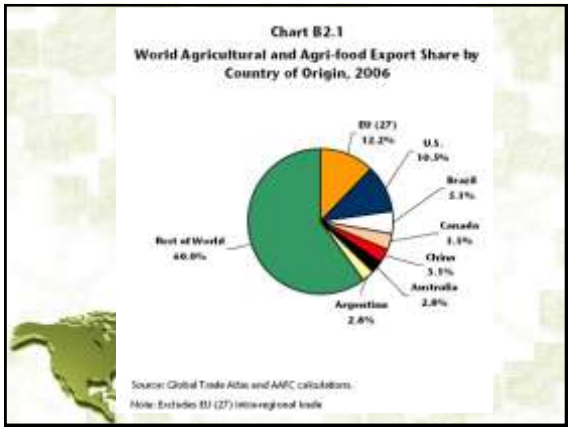
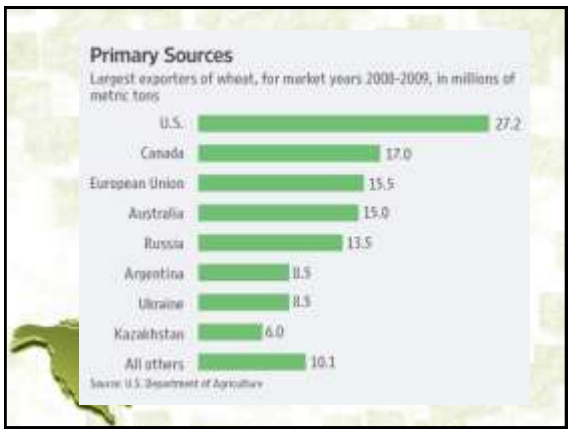
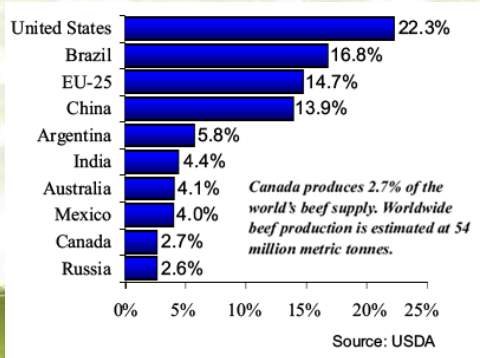


Chart B2.1
World Agricultural and Agri-food Export Share by Country of Origin, 2006
EU (27) 12.2%
U.S. 10.5%
Brazil 5.1%
Canada 5.1%
China 3.1%
Australia 2.8%
Argentina 2.8%
Rest of World 60.8%
Source: Global Trade Atlas and AAFC calculations.
Note: Excludes EU (27) intra-regional trade


TOP 10 WHEAT IMPORTERS AND EXPORTERS, 2007 (%)
RUSSIAN FEDERATION
13.5 CANADA
UKRAINE
10.8
9.8
EU
8.3
1.4
8.9 KAZAKHSTAN
USA 30.2
MOROCCO 3.3
3.7
6.8
1.5
2.3
2.8
6.1 JAPAN
3.3
MEXICO
ALGERIA
NIGERIA 2.8
PAKISTAN
CHINA
SOUTH KOREA
EGYPT
4.5 INDONESIA
BRAZIL 6.1
6.5
AUSTRALIA
9.3 ARGENTINA
Importers
Exporters


Primary Sources
Largest exporters of wheat, for market years 2008-2009, in millions of metric tons
U.S. 27.2
Canada 17.0
European Union 15.5
Australia 15.0
Russia 13.5
Argentina 8.5
Ukraine 8.5
Kazakhstan 6.0
All others 10.1
Source: U.S. Department of Agriculture



U.S. Other Exports

- Industrial supplies (chemicals)
- Telecommunications equipment, motor vehicle parts, aircraft
- Medicines, automobiles, computers

Developed or Developing?

- The United States and Canada have the following demographics:

	US	Canada
High Per Capita GDP	45,800	38,600
High Life Expectancy	78 years	81 years
Low Population Growth Rate	.88%	.83%
Low Infant Mortality	6.3/1000	5.0/1000

World Financial Markets

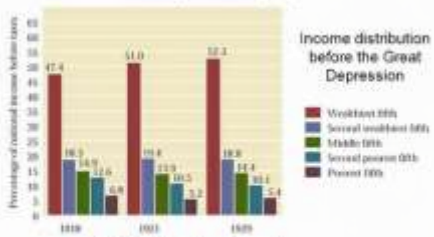
- The New York Stock Exchange is the center of the world financial markets. Other countries have stock exchanges such as Japan, Germany, and England but due to the size and power of the U.S. economy the NYSE affects all of them.

Economic Growth

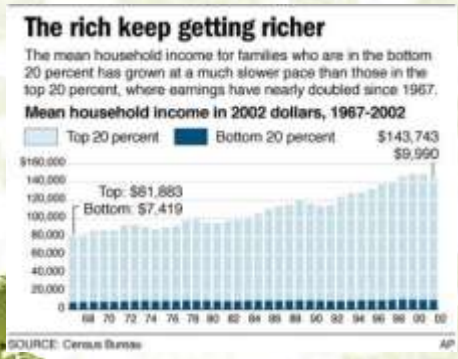
- The U.S. economy has experienced sustained economic growth since WWII, but there is a widening gap between the rich and the poor. Basically, the richest people are getting richer and the poorest people are getting poorer.

Causes of the Great Depression

Growing Income Disparity



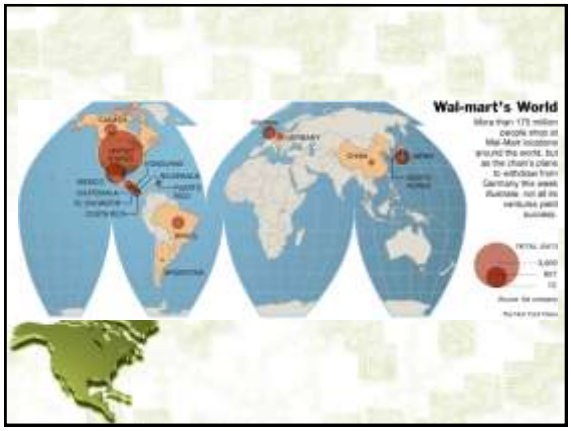
- Maldistribution of wealth
  - Fostered by Republican tax policies
  - Slowed consumption and prevented consumer-driven growth

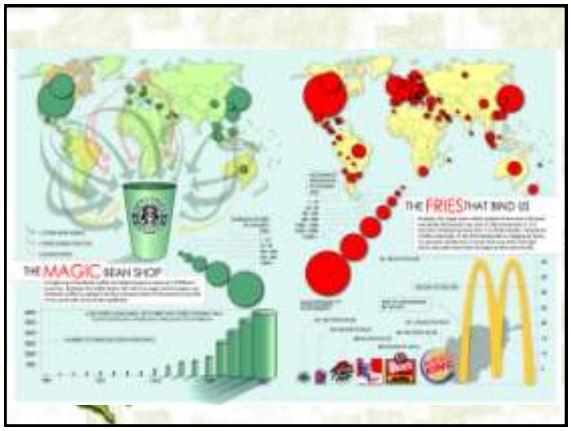


Multinational Corporations

- The U.S. is home to many multinational corporations:

A. Nike, Adidas
B. Starbucks
C. Wal-Mart
D. McDonald's, Burger King, KFC
E. Hilton





Years and countries where McDonald's opened.

Export of U.S. Culture

- U.S. culture has spread around the world via the global marketplace. McDonald's is one of the most recognized franchises in the world. Other examples are Coca Cola, blue jeans, and music.

NAFTA

- The United States, Canada, and Mexico are part of an economic union called NAFTA, The North American Free Trade Agreement. This agreement eliminates tariffs, or taxes, on imports between these three countries.

Start with this website:
http://maps.howstuffworks.com/north-america-land-use-resources-map.htm

Label the following	Symbol
Coal	
Oil	
Natural Gas Deposits	

More Assignments on U.S. Energy Use:

- Complete the following:
  - 1) The Google Earth Activity: "**Energy Consumption Rates across the USA and the World"**
  - 2) National Geographic lesson's "The Great Energy Debate at the website: http://www.nationalgeographic.com/xpeditions/lessons/16/g912/energydebate.html
  - Alternative Assessment: The Google Earth Lesson "**Selecting Sites for Renewable Energy Projects."**

FINAL ASSESSMENT: Become an expert in U.S. Geography by completing Online Games!

- 1) Go to: http://www.sheppardsoftware.com/web_games.htm
- 2) You MUST complete all levels of each type of U.S. Geography game! After you successfully complete a level by earning100%, show me, I'll record the grade, then you will move on to the next level!


Capitals
States
Landscapes
Tutorial
Click on the US States to learn their capitals.
Play!
Tutorial
Click on the US states to find their names.
Play!
Tutorial
Learn the geographic regions of the US by clicking on them.
Play!
++++++Try out our new USA Map Jigsaw Games!++++++
Capitals 1 - Beginner
Pick the correct state for the highlighted capital, by region.
Play!
States 1 - Beginner
Click on the correct state. You may select regions.
Play!
Landscape - Beginner
Click on the correct geographic region.
Play!
Capitals 2 - Intermediate
Pick the correct state for the highlighted capital.
Play!
States 2 - Intermediate
Drag each state onto the map by region.
Play!
Lakes - Tutorial
Learn the lakes of the US by clicking on them.
Play!


Capitals 3 - Expert
Pick the correct capital for the highlighted state.
Play!
States 3 - Expert
Drag each state onto the map.
Play!
Lakes G - Game
Click on the correct lake.
Play!
Capitals 4 - Cartographer
Type the first three letters of the state capital's name.
Play!
States 4 - Cartographer
Click on the correct state (no outlines given.)
Play!
Rivers L - Tutorial
Learn the rivers of the US by clicking on them.
Play!
Also try:
States 5 - Cartographer plus
Type the first three letters of the state's name.
Play!
Rivers G - Game
Click on the correct river.
Play!
States 6 - Explorer
Drag each state onto the map (states disappear).
Play!
Oceans L - Tutorial
Learn the bays, seas, and other ocean features around the US by clicking on them.
Play!


++++++Try out our new USA Map Jigsaw Games!++++++
States 7 - Explorer plus
Type the first three letters of the state's name (no outlines given.)
Play!
Oceans G - Game
Click on the correct body of water.
Play!
States 8 - Geographer
Drag and rotate each state onto the map.
Play!
States 9
Master Geographer
Drag, rotate and size each state onto the map. Hard!!!
Play!

9th Grade U.S. Geography Certificate of Completion

- The STEM SCHOOL and Mr. Cegielski do hereby recognize that the student _____(student's name) has completed the online U.S. Geography Games, earning the title of _____(Beginner, Intermediate, Expert, Cartographer, Cartographer +, Explorer, Explorer +, Geographer, Master Geographer).
- I am also among the top five in my class and, therefore, hold additional bragging rights to claiming myself to be a genius!

Extras