- It's not all about climate change
- It goes back much farther than you might think
- It involves basic elements of human life
- It has involved fundamental changes in living
- It covers a huge range of issues
- It has its own terminology
- It has heroes and villains
- It has always been controversial

Fundamental Topics:

Basic human needs

- Have to use natural resources to survive
- Renewability farming vs. mining, etc.
- Conflict harmony with nature vs. progress

Waste of all kinds

- Sewage evolution of ways to deal with it
- Garbage "Throw it away" dumping grounds
- Farming creates waste, uses lots of water

Industrialization (1860s-1900 or so)

- o "Progress" manufacturing, transportation, printing, communication, etc.
- Jobs, consumer goods, travel but impact often not considered
- First widespread air pollution also water and soil
- Factories would dump waste into bodies of water

Technology (20th-21st centuries)

- o Electrification, cars, telephone, labor-saving devices, food, medicine
- Choices made in development fossil fuels, mining, infrastructure
- Constant push for new solutions, innovations but some backfired (DDT, etc.)

Conflicts and effects:

- Nature lovers vs. business/consumer interests
 - Long history of depleting resources for financial, consumer benefits
 - o Consumers love new products and low prices, but at what cost?
 - o Companies need profits and dividends, but at what cost?

Rich vs. poor

- Mining and drilling for resources displacing communities
- Most development in rural areas jobs vs. befouling land/air/water
- Numerous examples of exploitation

Rational concern vs. unnecessary panic

- O What's being sought vs. what's being preserved?
- Costs vs. benefits, not just in financial terms
- O Where do you draw the line?

Effects of past unchecked use of resources

- Animal endangerment, loss of habitat, extinctions
- Permanent destruction of natural features
- Disruption of natural ecosystems

Core concepts and terms:

Ecosystem

- Interaction between all forms of life and nature
- Interdependency between one another cycles of life, death
- Originated in 1930s popularized in 1960s

Conservation and preservation

- Conservation responsible use of natural resources
- Preservation protects environment from harmful human activities
- At odds with many traditional practices and pursuits

Environmental science & ecology

- ES includes biology, geology, meteorology, chemistry, physics, and ecology
- Ecology focuses on relationships between living organisms
- Gained momentum and attention in 1960s Earth Day in 1970

Climate change

- Global warming/greenhouse effect cited in 1890s, got attention in 1970s
- Depletion of ozone layer discovered in 1980s action taken
- More study showed to be accumulation of many causes

Important people and events:

Theodore Roosevelt

- Always an outdoorsman, though grew up in New York City
- Created numerous national parks, forests, monuments, wildlife preserves

John Muir

- o Influential scientist, writer; founder of Sierra Club
- Writings popularized environmentalist point of view

National Park Service created (1916)

- Organized national agency to oversee, regulate park lands
- First organization of its type in the world

Rachel Carson

- Book Silent Spring (1962) documented effects of pesticides
- Bestseller focused spotlight on environmental issues

• Earth Day (1970)

- Originated by U.S. Senator Gaylord Nelson (SJSU grad)
- Focused attention on health and environmental impacts of industry

Founding of Environmental Protection Agency (1970)

- Nixon pursued this and similar legislation during presidency
- Pushed pollution reduction, recycling, car emissions into focus

Issues in today's environmental news coverage:

Politics

- Huge partisan divisions extend to these issues
- Competing factions even within parties

Transportation

- Move toward electric and fuel cell cars
- Bullet trains vs. airplanes, etc.

Alternative energy

- Wind, solar, hydroelectric, geothermal, biomass, hydrogen, tidal, etc.
- Each source has pluses and minuses, backers and detractors

Green technologies

- Reduce carbon emissions, reuse garbage & other waste
- Sustainability at heart of most endeavors

Climate change

- At heart of everything scientists united on this
- Different sides have different proposed solutions