Module 4 Sustainable Cities

* describe cities as urban ecologies

3 Subsystems of urban ecology: Build Environment, Bio-Physical Environment, Urban Social Systems

Built = Infrastructure Systems ie streets, waterways, highways

Urban Societies = involve social interactions between strangers

Bio-Physical = consist of living and non-living elements that make up natural environments

* explain strategies that begin to integrate the primary components of the urban ecology

Urban Societies, Livability, Bio-Physical Environment

* 1. Create a Compact Urban Area
  2. Support a Sustainable Economy
  3. Protect the Environment and Respond to Climate Change Impacts
  4. Develop Complete Communities
  5. Support Sustainable Transportation Choices
* discuss the strengths and weaknesses of megacities

Strengths = Economic growth, Stronger Community through different backgrounds

Weaknesses = Spread of diseases, Natural Disasters, Crime, Politics/Terrorist Attacks

* define urban resiliency and describe a specific example of the interdependency of the built, natural, and social sub-systems within a city

Vancouver Birds = Glass Visibility, Control of pests and other urban pests, Seeds dispersal

* Explain the Integrative Design Process (IDP) and describe a building that has been designed using the IDP

focuses on resource efficiency by employing systems thinking to derive multiple benefits from single expenditures

* Compare and contrast two sustainability certification processes

1. Leadership in Environmental and Energy Design (LEED)

- based on a credit system where any project can be assessed to have a specific number of credits in each of several design categories

2. Living Building Challenge

- Site, Water, Energy, Health, Materials, Equity, Beauty