

Environment, Chapters 1 and 2

Chapter 1, “Introducing Environmental Science and Sustainability” (10-11 optional)

- Why does the book open with a passage on Las Vegas? Why is it a city especially in need of a *systems perspective*? (i.e., why does “each “solution” ha[ve] the potential to cause additional problems”?)
- How does the textbook define poverty? Extreme poverty?
- What is the difference between people overpopulation and consumption overpopulation?
- What is an **ecological footprint**? (see Figure 1.8)
- **IPAT** [Influence = population x affluence per person x technology]
- What are the ‘three pillars’ of **sustainable development**?
- “**environmental science** tr[ies] to establish general principles about how the natural world works. [It] uses these principles to develop viable solutions to environmental problems”
 - **Systems, models, and ecosystems**
 - What is **dynamic equilibrium**?
- What distinguishes **negative** from **positive feedback mechanisms**?
- The core of the **scientific method** = testing hypotheses
- What distinguishes **inductive** from **deductive** reasoning?
- The five stages of addressing environmental problems (what example does the text use?)
 - 1) scientific assessment
 - 2) risk analysis
 - 3) public education and involvement
 - 4) political action
 - 5) evaluation

Chapter 2, “Environmental Laws, Economics, and Ethics” (35-42 optional)

- Who are the **stakeholders** in the opening page’s focus on old-growth coniferous forests in the Pacific Northwest?
- What effect did the **frontier attitude** have on the US environment in the 17th-19th centuries?
- What is a **utilitarian conservationist** (exs: Teddy Roosevelt, Gifford Pinchot)? A **biocentric preservationist** (ex: John Muir)?
- Examine the timeline on p. 28
- What is the role of the **environmental impact statement** as established by the **National Environmental Policy Act (NEPA)**
- Look at the table of legislation on Table 2.1. Most of the strongest environmental legislation came in the early to mid 1970s under President Nixon and a democratic Congress
- Economic assumptions: the **rational actor**, the pursuit of **efficiency**, and the presence of **externalities**
- What are some examples of **environmental ethicists** prioritizing “the rights of future generations?”
- How do the authors distinguish between **western** and **deep ecology** worldview’s? What does it mean to be anthropocentric? Biocentric?