

Focus Questions  
Introduction to Environmental Science  
Chapters 1-2  
APES

Chapter 1

- What is natural capital? Provide examples of the components. (1-1)
- Explain the general model of nutrient cycling in the environment. (1-1)
- Give specific examples of the differences between developed and developing countries. (1-2)
- Describe the differences between renewable, nonrenewable, and perpetual resources. Provide examples of each. (1-3)
- Describe in detail the concept of Tragedy of the Commons. Provide examples. (1-3)
- Compare and contrast the ecological footprint of a person living in a developed country with a person living in a developing country providing specific examples. (1-3)
- Describe and provide examples of point source and non-point source pollution. (1-4)
- Explain the strengths and weaknesses of both output pollution control and input pollution control. (1-4)
- Describe the five basic causes of environmental problems. (1-5)
- Explain the four scientific principles of sustainability. (1-6)

Chapter 2

- Explain the difference between radioactive decay, nuclear fission, and nuclear fusion. (2-4)
- What is kinetic energy? In what forms can it be found in nature? (2-4)
- In your own words, explain the first and second laws of thermodynamics. (2-4)
- Explain and provide examples of positive and negative feedback loops. (2-5)

**Chapter 1**

developed countries (p. 10)	environmentally sustainable society (p. 9)	pollution (p. 16)
developing countries (p. 11)	exponential growth (p. 5)	pollution cleanup (p. 17)
ecological footprint (p. 14)	gross domestic product (GDP) (p. 10)	pollution prevention (p. 17)
ecology (p. 7)	input pollution control (p. 17)	poverty (p. 18)
economic development (p. 10)	natural capital (p. 9)	recycling (p. 13)
environment (p. 6)	nonpoint sources (p. 16)	renewable resource (p. 12)
environmental degradation (p. 12)	nonrenewable resources (p. 13)	resource (p. 12)
environmental ethics (p. 20)	output pollution control (p. 17)	reuse (p. 13)
environmental science (p. 6)	per capita ecological footprint (p. 14)	social capital (p. 20)
environmental worldview (p. 20)	per capita GDP (p. 10)	solar capital (p. 9)
environmentalism (p. 8)	perpetual resource (p. 12)	sustainability (p. 8)
environmentally sustainable economic development (p. 11)	point sources (p. 16)	sustainable yield (p. 12)

**Chapter 2**

cells (p. 38)	high-quality energy (p. 42)	nuclear fusion (p. 40)
chemical change (p. 40)	high-quality matter (p. 39)	organic compounds (p. 38)
chemical reaction (p. 40)	inorganic compounds (p. 38)	pH (p. 37)
compounds (p. 35)	isotopes (p. 36)	physical change (p. 39)
electromagnetic radiation (p. 42)	kinetic energy (p. 40)	positive feedback loop (p. 45)
elements (p. 35)	law of conservation of energy (p. 42)	potential energy (p. 42)
energy (p. 4)	law of conservation of matter (p. 40)	radioactive isotopes (p. 40)
energy efficiency (p. 43)	low-quality energy (p. 42)	scientific (natural) law (p. 32)
energy productivity (p. 43)	mass number (p. 36)	scientific hypothesis (p. 30)
energy quality (p. 42)	matter (p. 35)	scientific theory (p. 31)
feedback loop (p. 44)	natural radioactive decay (p. 40)	second law of
first law of thermodynamics (p. 42)	negative feedback loop (p. 45)	thermodynamics (p. 43)
heat (p. 41)	nuclear fission (p. 40)	synergistic interaction (p. 46)