

Focus Questions
Land and Water Resources
Chapters 12-14
APES

Focus Questions

Chapter 12

- Explain the different food security issues people face. (12-1)
- Explain the different types of monocultures and polycultures. (12-2)
- Describe the different components of a soil. (12-2)
- Explain what the green revolution was and what advantages and disadvantages it had. (12-2)
- Explain how new crop varieties are produced. (12-2)
- Explain the positive and negative consequences of the increase of meat production. (12-2)
- Explain why fish and shellfish production has increased and what consequences resulted. (12-2)
- Describe the environmental impacts caused by food production. (12-3)
- Describe the advantages and disadvantages of conventional pesticides. (12-4)
- Explain why Rachel Carson is a significant environmental figure. (12-4)
- What laws and treaties regulate pesticides? (12-4)
- Describe the alternatives to conventional pesticides. (12-4)
- Describe how can the government improve food security. (12-5)
- Describe the ways soil erosion can be reduced. (12-6)
- Describe how soil fertility can be restored. (12-6)
- Describe the benefits of sustainable agriculture. (12-6)

Chapter 13

- Why is most freshwater on Earth not available to us? (13-1)
- By what processes does groundwater get recharged? Explain. (13-1)
- What challenges does the United States have related to freshwater resources? (13-1)
- What competing stresses impact our freshwater supplies? (13-1)
- Who manages our water and what are other options? (13-1)
- What are the advantages and disadvantages of extracting groundwater? (13-2)
- What is the Ogallala and what problems does it face? (13-2)
- What other problems can be associated with withdrawing groundwater? (13-2)
- What are the advantages and disadvantages of building dams? (13-3)
- Explain the problems associated with the Colorado River system. (13-3)
- Explain California's solution to its water problems. What problems does this solution possess? (13-4)
- Briefly explain the Aral Sea Disaster. (13-4)
- Explain desalinization. Is this a viable solution to our water problems? (13-5)
- What are some specific ways we can reduce water waste? (13-6)
- What specific ways can we reduce flood risk? (13-7)

Chapter 14

- Explain (or create a diagram to explain) the major features of the earth's crust and upper mantle. (14-1)
- Explain (or create a diagram to explain) how convection cells in the mantle impact the crust. (14-1)
- Explain the possible geological processes that could occur in an area where two tectonic plates meet. (14-1)
- Explain (or create a diagram to explain) the rock cycle. (14-2)
- What are the two main categories of mineral resources? Explain the ways we obtain them. (14-3)
- Explain the specific impacts of mining and the processing of mined materials. (14-3)
- Explain how available supplies of nonrenewable resources are determined. How does this impact the economics of nonrenewable resources? (14-4)
- Briefly explain the U.S. General Mining Law of 1872. (14-4)
- Why do we not currently extract low grade ores? How could this be improved? (14-4)
- What are specific ways mineral resources can be used more sustainably? (14-5)

Key Terms

Chapter 12

animal manure (p. 305)
aquaculture (p. 285)
chronic undernutrition (p. 277)
chronic malnutrition (p. 277)
commercial inorganic fertilizer (p. 305)
compost (p. 305)
desertification (p. 288)
famine (p. 278)
fisheries (p. 285)
food security (p. 276)
food insecurity (p. 276)
green manure (p. 305)

green revolution (p. 282)
high-input agriculture (p. 279)
hunger (p. 277)
industrialized agriculture (p. 279)
integrated pest management (IPM) (p. 300)
organic fertilizer (p. 305)
organic agriculture (p. 307)
overnutrition (p. 278)
pest (p. 293)
pesticides (p. 294)
plantation agriculture (p. 279)

polyculture (p. 280)
salinization (p. 288)
slash-and-burn agriculture (p.280)
soil (p. 281)
soil conservation (p. 302)
soil erosion (p. 287)
traditional intensive agriculture (p. 280)
traditional subsistence agriculture (p. 280)
waterlogging (p. 289)
windbreaks (p. 282)

Chapter 13

aquifers (p. 316)
dam (p. 324)
desalination (p. 332)
drainage basin (p. 317)
drought (p. 318)

floodplain (p. 338)
groundwater (p. 316)
reliable surface runoff (p. 317)
reservoir (p. 324)
surface runoff (p. 316)

surface water (p. 316)
water table (p. 316)
watershed (p. 317)
zone of saturation (p. 316)

Chapter 14

area strip mining (p. 357)
contour strip mining (p. 357)
core (p. 345)
crust (p. 347)
depletion time (p. 361)
earthquake (p. 350)
geology (p. 345)
high-grade ore (p. 355)
igneous rock (p. 353)
lithosphere (p. 347)
low-grade ore (p. 355)

mantle (p. 345)
metamorphic rock (p. 353)
mineral (p. 353)
mineral resource (p. 354)
mountaintop removal (p. 357)
open-pit mining (p. 357)
ore (p. 354)
overburden (p. 357)
reserves (p. 355)
rock (p. 353)
rock cycle (p. 353)

sedimentary rock (p. 353)
smelting (p. 359)
spoils (p. 355)
strip mining (p. 357)
subsurface mining (p. 355)
surface mining (p. 355)
tectonic plates (p. 347)
tsunami (p. 351)
volcano (p. 349)
weathering (p. 348)