

## Chapter 1—Environmental Problems, Their Causes, and Sustainability

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### MULTIPLE CHOICE

1. The goal of environmental science includes
  - a. learning how nature works.
  - b. understanding how we interact with the environment.
  - c. finding ways to deal with environmental problems.
  - d. finding ways to live more sustainably.
  - e. all of the above.

ANS: E                    PTS: 1                    DIF: Easy  
TOP: 1-1 What are three principles of sustainability?

2. The three principles of sustainability are
  - a. reliance on solar energy, biological diversity and nutrient cycling
  - b. environmentalism, ecosystems, and solar energy.
  - c. natural resources, natural services and water resources.
  - d. nutrient cycling, water resources, and environmentalism.
  - e. solar energy, ecosystems, and natural capital.

ANS: A                    PTS: 1                    DIF: Moderate  
TOP: 1-1 What are three principles of sustainability?

3. Meeting current and future basic resource needs without compromising future generation's basic needs is considered a(n)
  - a. natural income.
  - b. trade-offs.
  - c. scientific solutions.
  - d. environmentally sustainable society.
  - e. natural capital degradation.

ANS: D                    PTS: 1                    DIF: Easy  
TOP: 1-1 What are three principles of sustainability?

4. Which of the following does *not* describe a sustainable society?
  - a. lives off of income without depleting its natural capital
  - b. meets the needs of its people without jeopardizing the needs of future generations
  - c. manages its economy and population size without exceeding the carrying capacity of the environment
  - d. utilizes nonrenewable resources for maximum benefit of the current generation
  - e. protects the prospects of future generations of humans and other species

ANS: D                    PTS: 1                    DIF: Difficult  
TOP: 1-1 What are three principles of sustainability?

5. Use of a natural resource based on sustainable yield applies to
- renewable resources.
  - nonrenewable resources.
  - perpetual resources.
  - amenity resources.
  - all of these answers

ANS: A                    PTS: 1                    DIF: Difficult  
TOP: 1-1 What are three principles of sustainability?

6. On the outskirts of a municipality lies a forest on public property. A person applying sustainable resource-use principles might suggest
- clear-cutting the forest to provide taxes for the town.
  - converting the natural woods to tree farms.
  - harvesting trees at their estimated sustainable yield.
  - harvesting trees below their estimated sustainable yield.
  - none of these answers

ANS: D                    PTS: 1                    DIF: Difficult  
TOP: 1-1 What are three principles of sustainability?

7. All of the following are potentially renewable resources *except*
- groundwater.
  - trees in a forest.
  - fertile soil.
  - crude oil.
  - animals.

ANS: D                    PTS: 1                    DIF: Easy  
TOP: 1-1 What are three principles of sustainability?

8. Resources that are called nonrenewable are
- also called perpetual resources.
  - the only resources that are alive.
  - capable of depletion.
  - derived from solar capital.
  - none of these answers

ANS: C                    PTS: 1                    DIF: Easy  
TOP: 1-1 What are three principles of sustainability?

9. Which is the *least effective* way to extend the use of nonrenewable resources?
- reducing direct consumption of the resource
  - reusing the same form of a particular resource many times
  - recycling a resource into new products
  - reducing the efficiency of resource use
  - finding substitutes for a resource

ANS: D                    PTS: 1                    DIF: Difficult  
TOP: 1-1 What are three principles of sustainability?

10. Which of the following is an example of recycling?
- collecting and remelting aluminum beer cans
  - cleaning and refilling soft-drink bottles
  - selling used clothing at a garage sale
  - saving leftovers in a peanut butter jar
  - donating furniture to a charity

ANS: A                    PTS: 1                    DIF: Easy  
TOP: 1-1 What are three principles of sustainability?

11. As part of the path to sustainability, tradeoffs most specifically refer to
- trading environmental quality for economic growth.
  - trading quality of life issues for ecological enhancements.
  - resolving conflicts through compromise.
  - solving environmental conflicts.
  - recognizing that human activities degrade natural capital.

ANS: C                    PTS: 1                    DIF: Moderate  
TOP: 1-1 What are three principles of sustainability?

12. Gross Domestic Product (GDP) measures
- death rates.
  - economic growth.
  - economic development.
  - wealth of developing countries.
  - wealth of developed countries.

ANS: B                    PTS: 1                    DIF: Easy  
TOP: 1-1 What are three principles of sustainability?

13. Which of the following statements about developing countries is *true*?
- They are highly industrialized.
  - They have high average GNPs per person.
  - The United States, Canada, and Japan are developing countries.
  - Most of the projected increase in the world's population is expected to take place there.
  - Their populations are projected to dwindle.

ANS: D                    PTS: 1                    DIF: Moderate  
TOP: 1-1 What are three principles of sustainability?

14. Point sources of pollution include all of the following *except*
- an automobile tailpipe.
  - a factory smokestack.
  - a drainpipe from a power plant.
  - runoff from cropland.
  - an oil leak from a home furnace.

ANS: D                    PTS: 1                    DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

15. Nonpoint sources of pollution include all of the following *except*
- pesticides dispersed by airplane and wind onto a crop.
  - beach litter from fishing boats.
  - a smokestack from a power plant.
  - fertilizer runoff from neighborhood lawns.
  - runoff from cropland.

ANS: C                      PTS: 1                      DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

16. The effects of pollutants include all of the following *except*
- disruption of the health, survival or activities of humans and other organisms.
  - degradation of life support systems for humans and other organisms.
  - creation of unpleasant noise and scents.
  - damage to property.
  - increasing forests and agricultural land.

ANS: E                      PTS: 1                      DIF: Moderate  
TOP: 1-2 How are our ecological footprints affecting the earth?

17. Examples of the effects of pollution might include
- inability to see the top of skyscrapers because of the smog.
  - acid rain-induced destruction of a statue in your city park.
  - spread of disease from an open dump.
  - fish kills in lakes and streams.
  - all of these answers

ANS: E                      PTS: 1                      DIF: Easy  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

18. Which of the following is *not* associated with the pollution cleanup approach?
- It may be overwhelmed by continuing population growth.
  - It often transfers pollutants between different parts of the ecosystem.
  - It may be very costly once pollutants are dispersed in the environment.
  - It is the most economical in the long run.
  - all of these answers

ANS: D                      PTS: 1                      DIF: Difficult  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

19. Which of the following statements *best* illustrates the "tragedy of the commons?"
- A factory pollutes a river as much as the law allows.
  - Some levels of pollution are life threatening.
  - Some activities harm the environment, but others do not.
  - Irrigated cropland can be ruined by salinization.
  - Cropland can decrease biodiversity.

ANS: A                      PTS: 1                      DIF: Difficult  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

20. New efforts to prevent the "tragedy of the commons" could include
- using common-property resources at or above their sustainable yields.
  - using shared resources at rates below their estimated sustainable yields.
  - moving from a *users pay* approach to a *taxpayers pay* approach.
  - deregulating industries that use common-property resources.
  - increasing public availability to resources.

ANS: B                    PTS: 1                    DIF: Difficult  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

21. An ecological footprint may best be defined as the
- amount of land and water needed to supply people in a particular area with an indefinite supply of renewable resources.
  - amount of land and water needed to absorb and recycle the waste and pollution produced by resource use.
  - the environmental impact of people in less developed countries.
  - a and b
  - none of the above

ANS: D                    PTS: 1                    DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

22. An ecological deficit is created when
- a country's ecological footprint is smaller than its biological capacity to replenish its renewable resources and absorb the resulting wastes.
  - a country overestimates its spending in the current fiscal year.
  - a country depletes its annual budget faster than its biological capacity to replenish its renewable resources.
  - a country depletes its natural capital slower than its biological capacity to replenish its renewable resources and absorb the resulting wastes.
  - a country depletes its natural capital faster than its biological capacity to replenish its renewable resources and absorb the resulting wastes.

ANS: E                    PTS: 1                    DIF: Difficult  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

23. The country with the largest per capita ecological footprint is
- USA.
  - India.
  - Mexico.
  - Australia.
  - United Arab Emirates.

ANS: E                    PTS: 1                    DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

24. The country with the second largest per capita ecological footprint is
- USA.
  - India.
  - Mexico.
  - Australia.
  - United Arab Emirates.

ANS: A                    PTS: 1                    DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

25. The country with the world's largest population is
- USA.
  - India.
  - Mexico.
  - China.
  - United Arab Emirates.

ANS: D                      PTS: 1                      DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

26. Time delays in the harmful effects of living unsustainably often cause environmental degradation to build slowly until it reaches a(n)
- sustainable yield.
  - ecological tipping point.
  - exponential growth.
  - ecological footprint.
  - environmental worldview.

ANS: B                      PTS: 1                      DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

27. Ecological tipping point(s), which could result in an irreversible shift in natural systems include(s)
- collapse of fish populations due to overfishing.
  - accelerated species extinction due to overhunting.
  - pre-mature species extinction due to habitat loss.
  - climate disruption due to burning of fossil fuels.
  - all of the above.

ANS: E                      PTS: 1                      DIF: Moderate  
TOP: 1-2 How Are Our Ecological Footprints Affecting the Earth?

28. Which of the following characterizes cultural revolutions?
- decreased food supplies
  - increased resource consumption and pollution
  - worsening living standards
  - shorter life spans
  - lower average per capita GNP

ANS: B                      PTS: 1                      DIF: Moderate  
TOP: 1-4 Why Do We Have Environmental Problems?

29. Which of the following characterizes sustainability revolutions?
- decreased food supplies
  - increased resource consumption and pollution
  - worsening living standards
  - reducing our ecological footprint
  - rejecting the principles of sustainability

ANS: D                      PTS: 1                      DIF: Moderate  
TOP: 1-4 Why Do We Have Environmental Problems?

30. Which of the following major cultural changes to *Homo sapiens* has not intensified environmental degradation?
- Hunter-gatherer civilization
  - Agricultural revolution
  - Industrial-medical revolution
  - Information-globalization revolution
  - All of these cultural changes have led us to intensify environmental degradation.

ANS: A                    PTS: 1                    DIF: Moderate

TOP: 1-4 Why Do We Have Environmental Problems?

31. The human population currently totals
- 87 million.
  - 3.8 billion.
  - 4 billion.
  - 6.9 billion.
  - 10 billion.

ANS: D                    PTS: 1                    DIF: Moderate

TOP: 1-3 Why do we have environmental problems?

32. According to a number of environmental and social scientists, four basic causes of environmental degradation are
- non-existent.
  - poverty, population decline, unsustainable resource use, failure to include environmental costs in market prices.
  - poverty, population growth, unsustainable resource use, failure to include environmental costs in market prices.
  - poverty, population growth, unsustainable resource use, including environmental costs in market prices.
  - poverty, population decline, unsustainable resource use, including environmental costs in market prices.

ANS: C                    PTS: 1                    DIF: Difficult

TOP: 1-3 Why do we have environmental problems?

33. Underlying root causes of unsustainable resource use include all of the following *except*
- poverty.
  - overpopulation.
  - over reliance on renewable energy resources.
  - prices that do not include environmental and social costs of products.
  - wastefulness.

ANS: C                    PTS: 1                    DIF: Moderate

TOP: 1-3 Why Do We Have Environmental Problems?

34. We can face the challenge of slowing population growth through
- promoting family planning and elevating the status of women.
  - slowing economic development.
  - legislation that applies only in less developed countries.
  - overexploiting shared resources.
  - decreasing the educational status of women.

ANS: A                    PTS: 1                    DIF: Difficult

TOP: 1-3 Why do we have environmental problems?

35. Which of the following is *not* a result of being an affluent country?
- They can lead to people to become more concerned about environmental quality.
  - They provide financial incentives to develop technologies that reduce pollution.
  - The ecological health in the country usually degrades as wealth increases.
  - It allows for better education about topics concerning environmental quality.
  - It allows the affluent to obtain resources they need and want from almost anywhere in the world without seeing the negative impacts of their consumptive lifestyles.

ANS: C                    PTS: 1                    DIF: Difficult  
TOP: 1-3 Why Do We Have Environmental Problems?

36. Poverty is defined as
- the inability to live a healthy and productive life.
  - a life focused on gathering enough food and water for survival.
  - affluence.
  - the inability to meet basic survival needs.
  - the inability to meet one's basic survival and education needs.

ANS: E                    PTS: 1                    DIF: Easy  
TOP: 1-3 Why Do We Have Environmental Problems?

37. According to World Bank estimates, how many people live on less than US \$1.25 per day?
- 6.9 billion
  - 1.4 billion
  - 9.3 billion
  - 0.25 billion
  - 2.0 million

ANS: B                    PTS: 1                    DIF: Easy  
TOP: 1-3 Why Do We Have Environmental Problems?

38. Your environmental worldview describes
- your environmental ethic.
  - whether you are a creationist or evolutionist.
  - your perception of the role of *Homo sapiens* in the universe.
  - your assumptions and values about how the world works and what one's role in the world should be.
  - your political ideology that defines one's perception of the health of the planet.

ANS: D                    PTS: 1                    DIF: Easy  
TOP: 1-4 Why Do We Have Environmental Problems?

39. An environmental worldview that holds that we can and should manage the Earth for our benefit, but that we have an ethical responsibility to be caring and responsible managers of the Earth, is
- planetary management.
  - stewardship.
  - environmental wisdom.
  - national origin.
  - technological.

ANS: B                    PTS: 1                    DIF: Easy  
TOP: 1-3 Why Do We Have Environmental Problems?



40. An environmental worldview that holds that we are dependent on nature and our success is dependent on learning how the earth sustains itself and integrating this knowledge into the way we think and act, is
- planetary management.
  - stewardship.
  - environmental wisdom.
  - national origin.
  - technological.

ANS: C                    PTS: 1                    DIF: Easy  
TOP: 1-3 Why Do We Have Environmental Problems?

41. Which worldview is most consistent with the status quo in the United States?
- Planetary Management
  - Biocentric
  - Stewardship
  - Humility
  - Environmental Wisdom

ANS: A                    PTS: 1                    DIF: Easy  
TOP: 1-3 Why Do We Have Environmental Problems?

42. Of the following behaviors, the one that runs counter to the three principles of sustainability is
- recycling of materials.
  - reusing materials.
  - producing and consuming anything people are willing to buy.
  - initiating a tree planting drive in your community.
  - relying more on renewable sources of energy.

ANS: C                    PTS: 1                    DIF: Easy  
TOP: 1-4 What is an Environmentally Sustainable Society?

43. Of the following actions, the one that does the *least* to sustain the Earth is
- protecting Earth's biodiversity.
  - controlling human population growth.
  - utilizing renewable resources wherever possible.
  - increasing our dependence on nonrenewable resources.
  - decreasing our dependence on nonrenewable resources.

ANS: D                    PTS: 1                    DIF: Easy  
TOP: 1-4 What is an Environmentally Sustainable Society?

### TRUE/FALSE

1. Environmental science is an interdisciplinary study that integrates the humanities and natural sciences.

ANS: T                    PTS: 1                    DIF: Easy

2. Environmental science is the same as environmentalism.

ANS: F                    PTS: 1                    DIF: Moderate

3. Life on earth has sustained itself over billions of years even during long periods of cooling and warming of the earth's surface.

ANS: T                      PTS: 1                      DIF: Easy

4. Natural capital = Natural resources + Natural services

ANS: T                      PTS: 1                      DIF: Moderate

5. Natural capital degradation is a by-product of economic development.

ANS: T                      PTS: 1                      DIF: Moderate

6. When a nonrenewable resource is completely exhausted, it is referred to as economically depleted.

ANS: F                      PTS: 1                      DIF: Moderate

7. Reusing involves collecting waste materials and processing them into new materials.

ANS: F                      PTS: 1                      DIF: Moderate

8. Sustainability begins at a personal level.

ANS: T                      PTS: 1                      DIF: Easy

9. Forests, aluminum deposits and natural gas are all examples of renewable resources.

ANS: F                      PTS: 1                      DIF: Moderate

10. Pollution cleanup is considered a short-term solution if population and consumption levels grow without corresponding improvement in pollution control technology.

ANS: T                      PTS: 1                      DIF: Easy

11. The per capita ecological footprint is the availability of productive land and usable water to support the population with no consideration for environmental impact.

ANS: F                      PTS: 1                      DIF: Easy

12. The world's more developed countries contain relatively small populations, use large proportions of resources and produce the largest proportions of waste.

ANS: T                      PTS: 1                      DIF: Moderate

13. Rapid population growth and poverty are reflective of developing countries and have little impact on pollution.

ANS: F                      PTS: 1                      DIF: Easy

14. Population growth has declined since the 1960's.

ANS: T                      PTS: 1                      DIF: Moderate

15. Decreasing population growth in developed countries will decrease resource consumption.
- ANS: T                      PTS: 1                      DIF: Moderate
16. 83 million people were added to the earth in the year 2010. This is an average of 1.6 million new people on earth each month.
- ANS: F                      PTS: 1                      DIF: Difficult
17. An environmentally sustainable society must be based on policies which provide for economic growth and development.
- ANS: F                      PTS: 1                      DIF: Easy
18. Developing countries have a significant negative effect on the environment because of the consumption per person and technological impact per unit of consumption.
- ANS: F                      PTS: 1                      DIF: Moderate
19. Developed countries have a significant negative effect on the environment because of the consumption per person and technological impact per unit of consumption.
- ANS: T                      PTS: 1                      DIF: Moderate
20. Economic growth provides more goods and services whereas economic development uses economic growth to improve living standards.
- ANS: T                      PTS: 1                      DIF: Moderate
21. The "tragedy of the commons" refers to lack of agricultural sustenance available for the common (poor) people in a country.
- ANS: F                      PTS: 1                      DIF: Easy
22. An environmentally sustainable society will require most middle income American workers to decrease their consumption of products.
- ANS: T                      PTS: 1                      DIF: Easy
23. In the United States the air quality is poorer and drinking water more polluted today than in the 1970s.
- ANS: F                      PTS: 1                      DIF: Moderate
24. When a country's GDP decreases, the per capita GDP must also decrease.
- ANS: F                      PTS: 1                      DIF: Difficult
25. There are a number of strategies and tools available to conserve rather than degrade or destroy the planet's capital
- ANS: T                      PTS: 1                      DIF: Easy

## COMPLETION

1. The three principles of sustainability are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

ANS: relying on solar energy, biodiversity, nutrient cycling (in any order)

PTS: 3                    DIF: Moderate

2. Dealing with conflicts between scientific solutions and political solutions usually involves \_\_\_\_\_.

ANS: making trade-offs

PTS: 1                    DIF: Difficult

3. A social movement dedicated to protecting Earth's life support system for all living things is called \_\_\_\_\_.

ANS: environmentalism

PTS: 1                    DIF: Moderate

4. The highest rate at which we can use a renewable resource indefinitely without reducing its available supply is called its \_\_\_\_\_.

ANS: sustainable yield

PTS: 1                    DIF: Moderate

5. A resource such as water that is renewed continuously is called a(n) \_\_\_\_\_.

ANS: renewable resource

PTS: 1                    DIF: Easy

6. Non-renewable resources include \_\_\_\_\_ sources such as oil and natural gas that cannot be recycled.

ANS: energy

PTS: 1                    DIF: Moderate

7. A chemical dumpsite would be an example of a \_\_\_\_\_ pollutant.

ANS: point source

PTS: 1                    DIF: Moderate

8. The consequences of volcanic eruptions and burning coal are \_\_\_\_\_ and \_\_\_\_\_.

ANS:

air pollution; global warming  
global warming; air pollution

PTS: 1                    DIF: Moderate

9. Installing runoff curtains in a construction site is an example of \_\_\_\_\_ pollution control.

ANS: output

PTS: 1                    DIF: Moderate

10. Reducing the packaging on manufactured goods is an example of \_\_\_\_\_.

ANS: pollution prevention

PTS: 1                    DIF: Moderate

11. The action of processing plastic or aluminum cans into another usable product is called \_\_\_\_\_.

ANS: recycling

PTS: 1                    DIF: Easy

12. Old soda bottles that are collected, washed, and refilled are an example of \_\_\_\_\_.

ANS: reuse

PTS: 1                    DIF: Easy

13. \_\_\_\_\_ are not owned by a single person or organization, but are degraded by many people.

ANS:

Common-property resources  
Free-access resources

PTS: 1                    DIF: Moderate

14. \_\_\_\_\_ is a possible solution to the problem of people exploiting a free-access resource, but it may not be practical for global common resources.

ANS: Private ownership

PTS: 1                    DIF: Difficult

15. One way to deal with degradation of common property is to use shared renewable resources at or below its estimated \_\_\_\_\_.

ANS: sustainable yield

PTS: 1                    DIF: Difficult

16. Some analysts refer to an eventually unsustainable addiction to buying more and more stuff as \_\_\_\_\_.

ANS: affluenza

PTS: 1                    DIF: Easy

17. The United States, Canada, and Japan are examples of \_\_\_\_\_ with a high average per capita GDP.

ANS: developed countries

PTS: 1                    DIF: Easy

18. Developing countries have a low \_\_\_\_\_, which poses a threat to their ability to become environmentally sustainable.

ANS: GDP

PTS: 1                    DIF: Difficult

19. Your \_\_\_\_\_ refers to the set of assumptions and values a person holds with regard to his or her role in the world.

ANS: environmental worldview

PTS: 1                    DIF: Moderate

20. \_\_\_\_\_ is the ability of the environment to function indefinitely in an optimally healthy state.

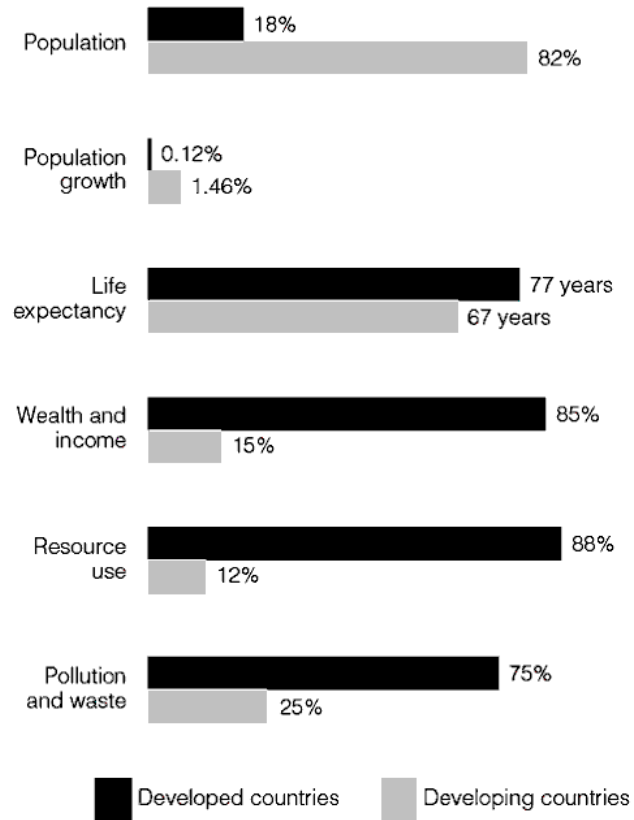
ANS: Environmental sustainability

PTS: 1                    DIF: Moderate

## OTHER

### Critical Thinking

#### Percentage of World's:



1. What does this graph say about the world's percentage of resource-use in developed countries?

ANS:

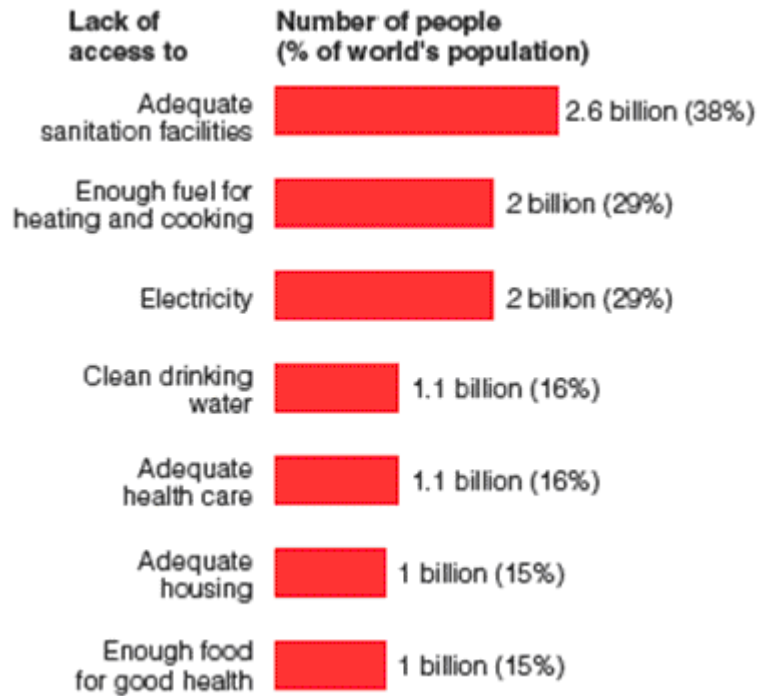
Developed countries' populations use about 88% of the world's resources.

PTS: 1

DIF: Easy

OBJ: Critical Thinking

## Critical Thinking



2. Do you think that the numbers overlap in the graph of the percentage of the world's population who lack access to basic amenities? Why?

ANS:

Often times the effects of poverty are not isolated. Also, the total percentage of the world's population without access to these amenities is greater than 100%.

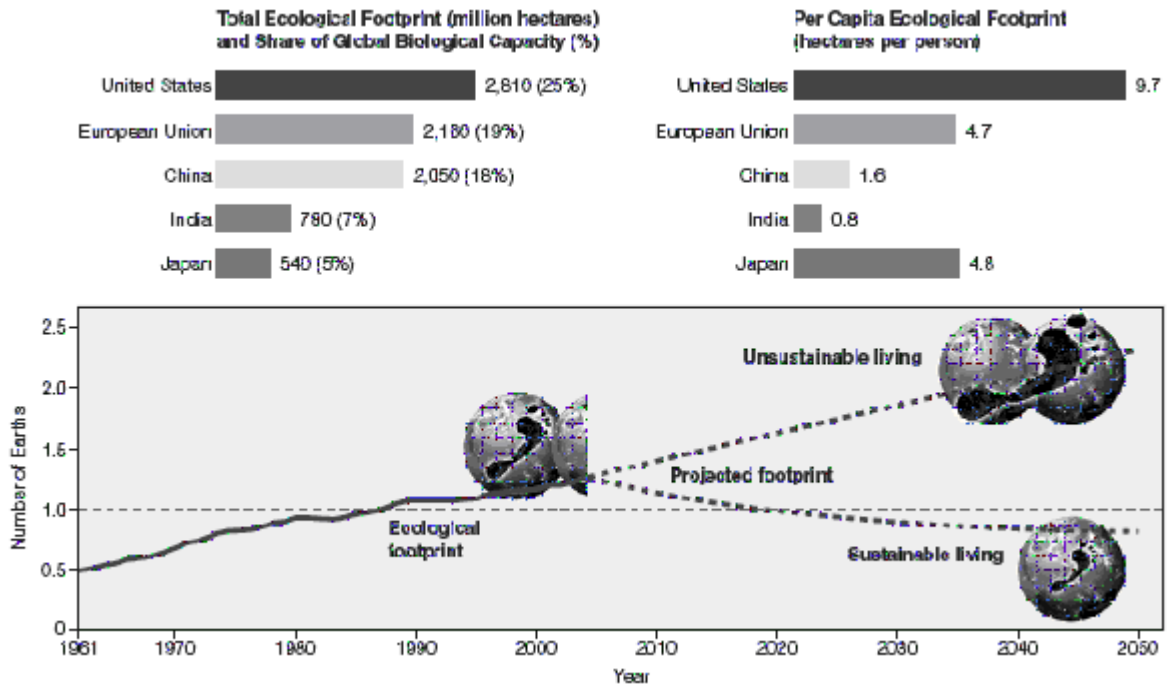
PTS: 1

DIF: Difficult

OBJ: Critical Thinking



## Critical Thinking



3. How many Earths are we currently using compared to Earth's ecological capacity?

ANS:  
1.25

PTS: 1                    DIF: Easy                    OBJ: Critical Thinking

4. What will happen if humanity's ecological footprint continues to be greater than Earth's ecological capacity?

ANS:  
Humans will destroy their environment, more and more animal and plant species will be lost, poverty and disease will increase, etc.

PTS: 1                    DIF: Moderate                    OBJ: Critical Thinking

5. Is China's total ecological footprint greater than that of India's?

ANS:  
yes

PTS: 1                    DIF: Easy                    OBJ: Critical Thinking

6. What does the difference in ecological footprint between China and India mean?

ANS:  
China's overall effect on the environment is more severe than that of India's.

PTS: 1                    DIF: Difficult                    OBJ: Critical Thinking

## SHORT ANSWER

1. What are the four (4) basic causes of environmental problems?

ANS:

population growth, wasteful and unsustainable resource use, poverty, and failure to include the environmental costs of goods and services in their market prices

PTS: 1                    DIF: Easy

2. Describe the environmental wisdom worldview and provide an example.

ANS:

"we are part of and totally dependent upon nature and that nature exists for all species, not just us. It also calls for encouraging environmentally friendly forms of economic growth and development and discouraging Earth-degrading forms. Our success depends on learning how life on Earth sustains itself and on integrating *environmental wisdom* into the ways we think and act." Examples will vary.

PTS: 1                    DIF: Easy

3. List the three scientific principles of sustainability and give an example of each.

ANS:

Reliance on solar energy, biodiversity and nutrient cycling. Examples will vary.

PTS: 1                    DIF: Easy

4. How does environmentalism differ from environmental science or ecology?

ANS:

Environmentalism is a social movement toward protecting earth's life systems that is practiced more in the political and ethical arenas whereas environmental science practiced in the science arena.

PTS: 1                    DIF: Moderate

5. Why does the search for scientific solutions to sustainability problems often involve conflicts?

ANS:

Scientific solutions most times do not involve political solutions. Trade-offs or compromises become necessary in order to implement scientific solutions through political processes.

PTS: 1                    DIF: Difficult

6. Make an argument supporting the statement that *individuals matter in making the shift toward environmental sustainability?*

ANS:

Sustainability begins with our daily choices. It only takes 5-10% of the population in a community to bring about major change in a relatively short time frame.

PTS: 1                    DIF: Difficult

7. Although the poor have limited access to resources, they still have an overall high environmental impact. Explain why this statement is true.

ANS:

The large number of poor that are preoccupied with daily sustenance do not focus on long term environmental issues, which leads to environmental degradation.

PTS: 1                    DIF: Moderate

8. Poverty can increase environmental degradation; however, environmental degradation can increase poverty. Why is this so?

ANS:

Poor people may be less concerned about environmental issues since they are preoccupied with daily existence. However, the poor are severely impacted by environmental degradation since they have less access to adequate sanitation and health care facilities.

PTS: 1                    DIF: Moderate