Module 5
Multiple Choice Questions
1. The population of Boston today is _____ compared to its population after World War
    a. The same
    b. Slightly higher
    c. Considerably higher
    d. Less

2. Why did the risk of acquiring disease decrease for people living in cities since the 1850's?
    a. The "sanitation revolution" improved the water supplies
    b. Urban residents received more regular vaccinations
    c. Antibiotics were more readily used
    d. All of the above

3. Which neighborhood in Boston had the highest rates of Chlamydia in 2006?
    a. Allston/Brighton
    b. Roxbury
    c. Jamiaca Plain
    d. Roslindale

4. According to the map showing deaths resulting from poor air quality worldwide, which regions of the world have the poorest air quality?
    a. Brazil
    b. China
    c. Canada
    d. Australia

5. Which regions have the lowest rates of death due to poor air quality?
    a. The United States
    b. Greenland
    c. Eastern Europe (Poland, Slovakia, the Czech Republic)
    d. India

6. Which factor least influences whether a country will have a higher life expectancy?
    a. The level of racial diversity
    b. Quality sanitation and sewage treatment facilities
    c. Access to food
    d. Access to medicine

7. In the powerpoint activity for this lesson, you witnessed photographs of typical weekly food consumptions for families in various countries. Which country depicted a photograph of a family who consumed the LEAST amount of fruits and vegetables and the MOST amount of processed food?
   a. Germany
   b. Poland
   c. Chad
   d. United States

8. Bacteria, such as E. Coli, in our water can come from
   a. Factory run-off
   b. Car exhaust
   c. Human and animal feces
   d. Littering

9. Which of the following is not a common type of water pollutant?
   a. Protists
   b. Bacteria
   c. Particulates
   d. Carbon Monoxide

10. Here in Boston our water comes from
    a. Groundwater
    b. The Charles River
    c. Marlborough
    d. The Quabbin Reservoir

11. All of the following are ways that you can reduce your contributions to ground ozone pollution except
    a. Conserving energy at home and at school
    b. Carpooling more to reduce pollution
    c. Use low VOC paints
    d. Stop smoking

12. In Massachusetts, which year contained the highest level of days exceeding the 8-hour average ground-level ozone standard?
    a. 1983
    b. 1984
    c. 2007
    d. 1999

13. In activity 5, all of the following people got sick from the concession stand except
    a. Jose
    b. Lisa
    c. Mia
    d. Ken

14. Some eating habits that seem to contribute to the incidence of cardiovascular disease are
    a. A diet that is high in fat
    b. A diet that is low in vegetables
    c. A diet that is low in fruits
    d. All of the above

15. The main reasons that childhood obesity rates are higher among the areas of the highest poverty are
    a. Limited access to parks
    b. Limited access to recreational areas
    c. Children in areas of poverty eat less fruits and vegetables and more chips and soda
    d. All of the above

16. Why does more green space result in stronger neighborhoods?
    a. Stronger neighborhood social ties
    b. Decreased crime
    c. More vegetation in a building, the fewer the crimes
    d. All the above

Short Answer and Essay

1. Explain the relationship between wealth and health that you tend to see throughout the world.

2. In the 1800's, was it healthier to live in the city or rural areas? Why?

3. How is the city healthier today than in the 1800's?

4. What is Germ Theory and how did it impact the health of people in cities?

5. Describe two daily behaviors of yours which improve your health and one which is detrimental to your overall health.

6. What is potable water? Why is it important for human health?

7. Name and describe one contaminant that you might find in water.

8. Name and describe one common treatment process. Which is the best and easiest method to employ?

9. What is "good ozone"? Where is it found? Why is it good?

10. What is "bad ozone"? Where is it found? Why is it bad?

11. Does physical contact increase the spread of disease? How?

12. Describe the work of a public health program.

13. In the activity where you played the role of a public health official looking into an outbreak people reported symptoms of nausea, diarrhea, fever, and chills. What was one method in which a public health officials gathered infomation? Why was this method so succeesful in tracking the point source of the infection?

14. How did the glow powder activity make you think differently about the transmission of disease?

15. What are some ways in which you might prevent or limit the transmission of disease?

16. If you had $70/wk to spend on a family of four for food, what would you spend your money on and why? Please prioritize your choices and explain why you choose the foods you chose.

17. If you had $140/wk to spend on a family of four for food, what would you spend your money on and why? Please prioritize your choices and explain why you choose the foods you chose.

18. What are some dietary factors that contribute to a person developing cardiovascular disease? In other words, what types of eating habits would increase a person's risk of developing cardiovascular disease?

19. What is the relationship between the amount of money people budget for their weekly food allowance and the risk of cardiovascular disease?

20. Why do students who live closer to parks and open space burn more calories then students who don't have as much green space near their homes?

21. Why are obesity rates higher in the areas of the most poverty?

22. Define a social network.

23. How do social networks benefit communities? How do social networks help improve an individual's health?

24. Why do green spaces promote positive social networks?

25. After completing activity 9, explain the relationship between wealth and obesity in NYC neighborhoods.

26. In examining the spreadsheet entitled, "Asthma Hospitalizations", which neighborhood suffers the most from asthma? Which suffers the least? Is there a relationship between these two pieces of information?

27. In looking at the chart titled, "Wealth and Diabetes", which neighborhood suffers the most from diabetes? Which neighborhoods suffer the least? How do these answers compare to median household income?

28. How can I make my neighborhood a healthier place to live?

29. What are some characteristics of cities that impact the health of an individual living in a city?

30. What do you think is the most important public health issue in your community? Why?

31. What are 2-3 actionable steps you can take to improve the health of your neighborhood? What are 2-3 actionable steps you can take to improve the public health of your school community?

Module 5 Answers

Multiple Choice

1. D
2. D
3. B
4. B
5. B
6. ?
7. ?
8. C
9. D
10. D
11. D
12. A
13. D
14. D
15. D
16. D

Short Answer and Essay

1. Areas of the world with the greatest wealth tend to have the lowest health risks.
2. It was healthier to live in rural areas than in cities during this time period since the chance of catching a disease in a city was high. Cities did not have clean water and waste removal methods.
3. Students may discuss less chance of catching disease in the city, better services including cleaner water and waste removal. Students may also mention social services and physical, biological, chemical, and political aspects (if they recall aspects covered in Module 1).
4. Germ theory is the idea that communicable diseases are caused by microorganisms. Sanitation can prevent such disease.
5. Improve health: walk, bike, brush teeth, eat breakfast, wash hands/decrease health: skip meals or eat unhealthy sugary processed food, smoke.
6. Drinking water or water that is fit for humans to consume. Contaminated water often leads to disease.
7. Students may describe bacteria, protozoa, chemicals or toxins, and particulates. Bacteria are small organisms that can cause infection. Protozoa are single-celled parasites that may cause infection in the small intestine.   Chemicals may include pesticides, herbicides, and heavy metals which may have direct effects on the human body. Particulates are solid objects that can not be dissolved in water. They may include large itms such as leaves or small items.
8. Boiling, bleaching, iodine treatment, solar and ultraviolet purification, solar distillation, and filtration are common water treatments. A brief description is included in the student

handouts. Students should be able to highlight the main points. The best and easiest method is boiling the water.

9. Good ozone is found in the lower stratosphere, 10 miles up in the air. It is good because it block the suns harmful UV rays from hitting the earth.

10. Bad ozone is formed at ground level from a chemical reaction between sunlight and smog or other products of combustion. It is causes respiratory problems, aggravating asthma or bronchitis.

11. Physical contact may increase the spread of disease depending on the mode of transmission for the infectious agent. Physical contact via shaking hands or touching the same infected surface increases transmission of the infectious agent.

12. Public health programs work to keep populations safe. Local agencies may monitor restaurants and neighborhoods. Public health programs also monitor patterns/trends such as asthma, obesity, diabetes, and heart disease. Public health officials also track the patterns and incidence of outbreaks and work with other agencies to minimize the impact of disease.

13. Public health officials interviewed patients to see where they had been and what they had eaten during the past several days. This method is very important in tracking disease. Looking for the common link among the people who were ill enabled the public health officials to track the most likely source of the illness.

14. Disease may be transmitted in a variety of ways. In this case it was transmitted via physical contact with the paper or with the person's hands who was infected. Students may describe how they were suprised by how quickly the glow powder was spread. Students may also discuss the idea that you can transmit disease without even knowing that you are doing it.

15. Students may mention at this point, handwashing and covering their mouth when sneezing. Students may also discuss trying to assess the cleanliness of eating establishments and food-handling methods.

16. Mostly grains and vegetables because they are cheap and nutritious. A little bit of unprocessed meat, but not too much because it is too expensive. If there was money left over I would get snacks and desserts.

17. Some grains and vegetables, maybe organic if I can afford it. More meat and snacks and dessert.

18. A diet high in meats and fats, excessive salt. Low in fruits and vegetables. In other words eating at McDonalds.

19. People with more money to spend on food also tend to have greater access to healthier food such as fruits and vegetables. Therefore the more money you budget for food the lower your risk of cardiovascular disease.

20. If you live closer to parks you are more likely to use them and get some exercise instead of sitting inside in front of the TV.

21. Chips and soda are cheaper per calorie than fruits and vegetables however they lead to obesity.

22. Interactions between people in a neighborhood where people can rely on each other for information and socializing.

23. Communities with strong social networks are happier, have less crime, and residents have a greater sense community belonging.

24. Well maintained green spaces provide communal spaces for neighbors to get together and talk. People are less likely to stay cooped up in their apartments watching TV if there is a nice park nearby.
25. The lower the income, the higher the rates of obesity in NYC neighborhoods. Conversely, the higher the income, the lower the rates of obesity in NYC neighborhoods.
26. The neighborhood that suffers the most from asthma is East Harlem, Manhattan with 18 hospitalizations per 1000 children age 0-14. The neighborhood that suffers the least is Borough Park in Brooklyn. In general the neighborhoods with the lowest median household income have the highest asthma hospitalizations per 1000 children and the neighborhoods with the highest average median income have the least asthma related hospitalizations.
27. The Williamsburg-Bushwick neighborhood suffers the highest percentage of residents with diabetes. The lower and upper east side of Manhattan have the lowest % of residents with diabetes (as well as Kingsbridge-Riverdale in the Bronx and Downtown-Heights-Slope in Brooklyn). The neighborhoods with the highest median household income tend to have the lowest percentages of residents with diabetes.
28. Student Answers will vary
29. Less green space, more fast food restaurants, less access to fresh fruits and vegetables.