

# Grades 7 – 9 Unit 4 Pre-Test

Predicting the consequences of changes for human civilization

Name \_\_\_\_\_ Class \_\_\_\_\_

1. Describe a specific way climate change could affect an individual's life. Who is this person? Where do they live? How does climate change impact him or her personally?

2. Fill in the chart below. List three effects of climate change; explain how climate change causes each effect; and describe consequences to humans, other organisms, or ecosystem services.

12 points (1 point for each box) See examples below:

Effect of climate change	What does it mean?	How does climate change cause this effect?	What are the consequences?

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3. In your own words, define “ecological footprint” and describe how an ecological footprint is related to climate change (4 points: 1 for definition, 3 for connection between ecological footprint and climate change).

4. List and describe two ways that your family can reduce its ecological footprint.

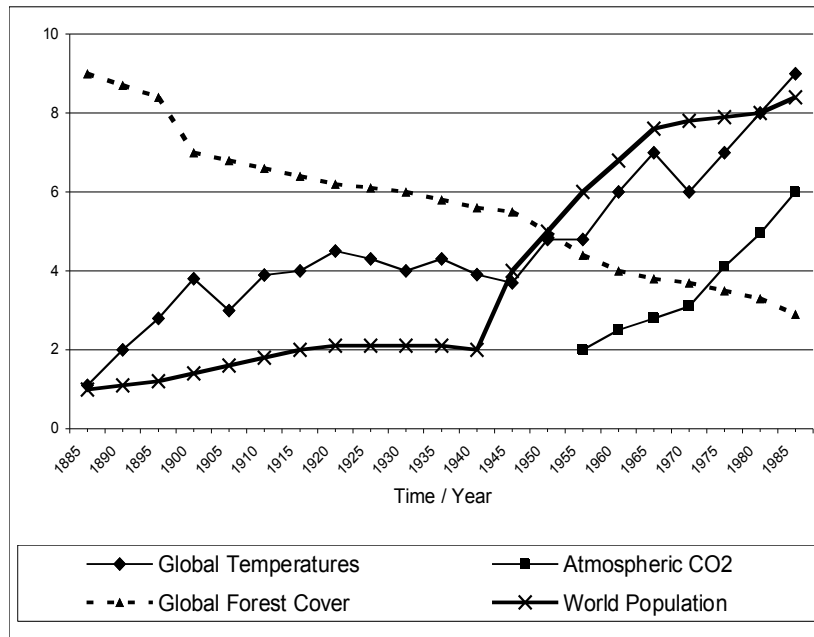
5. When would carbon dioxide be absorbed or taken out of the atmosphere?
- a. In rainforests
  - b. By cars
  - c. By burning coal
  - d. By spraying aerosol cans
6. In 2000, the average world ecological footprint was  $0.022 \text{ km}^2$ . In 2000, the ecological footprint in Indonesia was  $0.010 \text{ km}^2$ . Which of the following accurately explains Indonesia’s use of resources?
- a. Indonesia’s population is increasing at a fast rate.
  - b. The amount of resources available per household is high.
  - c. The average citizen of Indonesia uses more resources than the average citizen of the United States.
  - d. Indonesia has good sustainable use of resources.

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7. Which two of the global trends represented in the graph are most directly causally related?  
(One trend is a cause of the other.)
- a. Population and forest cover change
  - b. CO<sub>2</sub> levels and temperature change
  - c. Temperature and forest cover change
  - d. **Population and temperature rise**

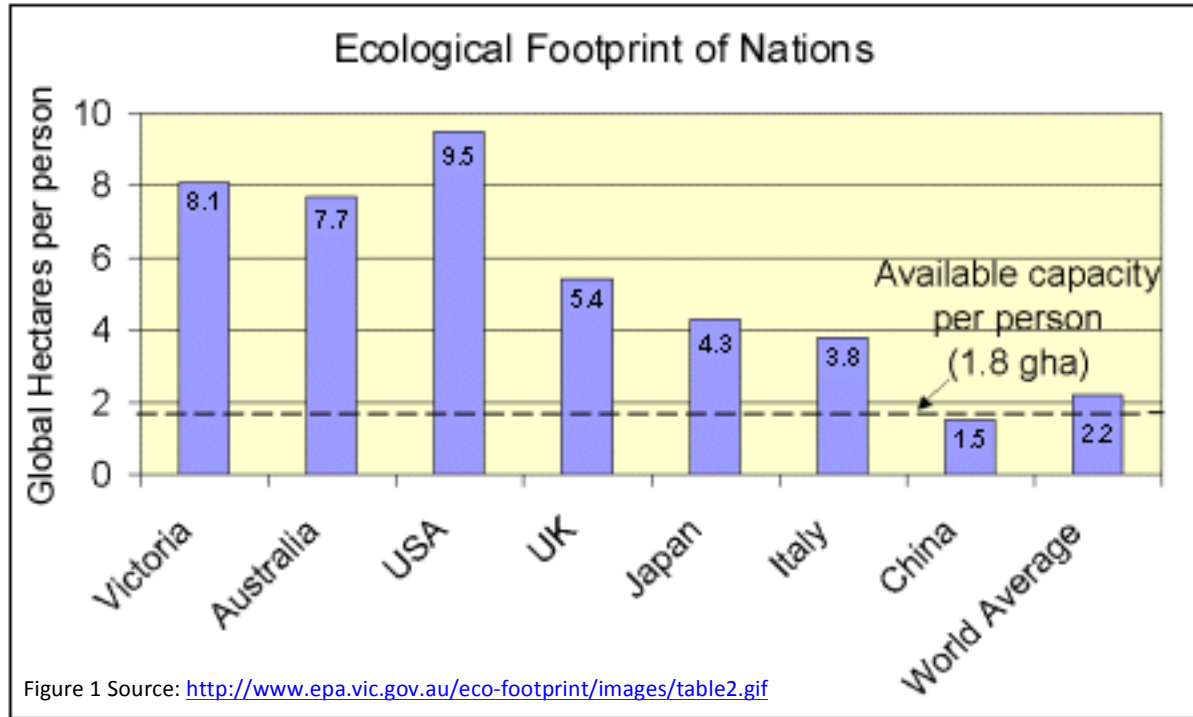


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Use the graph below to answer the following questions. (Q 38)



8. Which of the following countries has the smallest ecological footprint per person?
  - a. Japan
  - b. Italy
  - c. China
  - d. U.S.A.
  
9. Suppose the world population increases dramatically over the next ten years in all areas of the world. How would this phenomenon likely affect the information displayed in Figure 1?
  - a. Sustainability of resources would increase
  - b. The U.S.A. would no longer have the highest ecological footprint per person
  - c. The world average ecological footprint per person would decrease
  - d. The average available capacity per person would decrease
  
10. On average, compared to people from other countries, Americans:
  - a. Use fewer resources
  - b. Use about the same amount of resources
  - c. Use far more resources
  - d. Don't use resources

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11. Which of the following activities can *most directly* decrease contribution to increased greenhouse gases in the atmosphere?

- a. Turning off the water when you brush your teeth
- b. Taking the bus instead of driving to school
- c. Using a reusable lunch bag
- d. Donating your old clothes to a clothing drive

12. Read the descriptions of two students' lifestyles below. Predict which student's lifestyle requires more environmental resources. Provide evidence from the lifestyle descriptions to support your prediction:

**Lifestyle 1:** Warren plays football for his local high school. He rides the public bus about 3 miles each day to school. He rides by car about 25 miles each week to run errands with his parents. Their car averages 25 miles per gallon. As a football player, Warren eats a lot of food. A big part of his diet is animal products (meat, cheese, milk). Most of the food he eats is processed and packaged. His family throws out more garbage than other families in the neighborhood.

**Lifestyle 2:** Eddie doesn't play sports. He walks to school each day. In the afternoons, he rides with his older brother to help out on his uncle's organic vegetable farm. They travel more than 400 miles each week. His brother drives an SUV that gets 15 miles per gallon. Eddie does not like meat. He is a strict vegetarian. His family eats a lot of fresh vegetables from his uncle's farm. His family throws away less garbage than other families in the neighborhood.

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13. Think about many solutions to the current climate change problem. Which of the solutions do you feel is the most reasonable? Please explain why you feel this way.