

Grades 7 – 9 Unit 4 Post-Test

Predicting the consequences of changes for human civilization

Name _____ Class _____

1. Describe a specific way in which 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 the consequences (to humans, other organisms, or ecosystem services).

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 this concept is related to climate change.

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

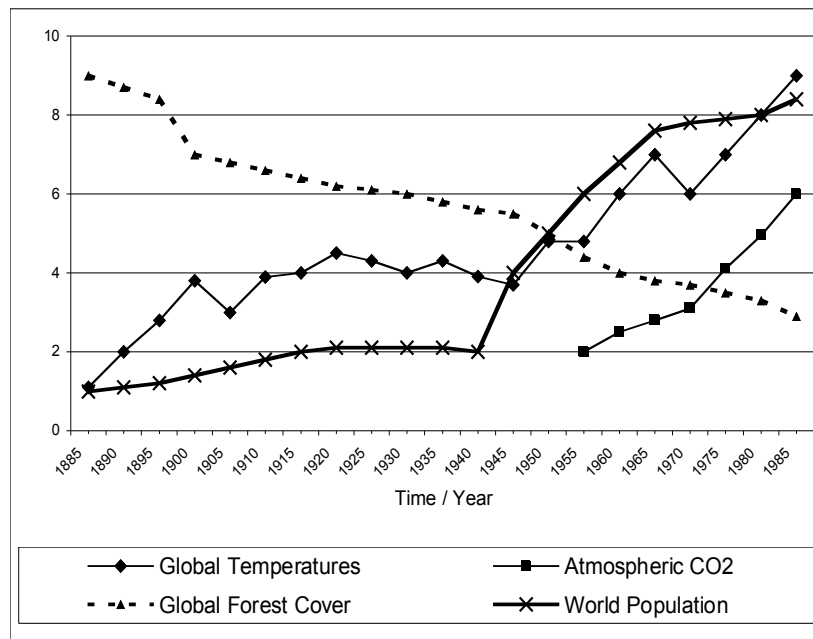
5. Which of the following can remove carbon dioxide from the atmosphere?
- a. Animals
 - b. Landfills
 - c. Plants
 - d. Cars
6. In 2005, the ecological footprint of Chile was .04 square kilometers per person, and the ecological footprint of New Zealand was .1 square kilometers per person. Which of the following statements is incorrect:
- a. New Zealand must have more people than Chile.
 - b. In New Zealand, each person uses more resources than in Chile.
 - c. People in Chile need more land than people in New Zealand.
 - d. People in New Zealand use resources more sustainably than people in Chile.

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7. Which two of the global trends represented in the graph are most directly causally related? In this case, one trend is a cause of the other.
- a. Population and forest cover change
 - b. CO₂ 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)

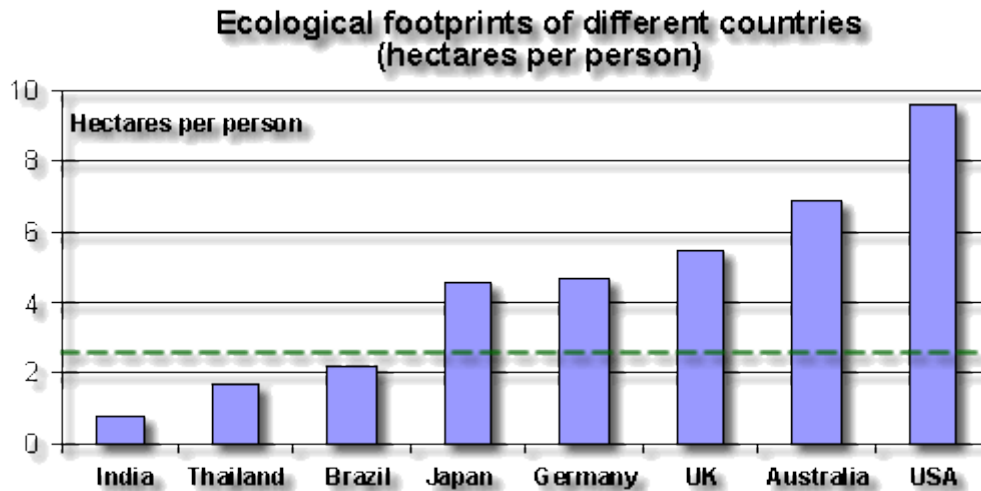


Figure from: Sustainability-ed.org.uk

8. Which of the following countries has the smallest ecological footprint per person?
 - a. Japan
 - b. Italy
 - c. U.S.A.
 - d. Thailand
9. The green line represents an estimate that the Earth can sustain 2.3 hectares per person. Which of the following is incorrect?
 - a. People in Australia are using more than twice the amount of resources that are sustainable
 - b. People in Brazil are using more than their share of resources
 - c. People in Germany and Japan are using resources at about the same rate
 - d. People in India are using less than one hectare worth of resources per person
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
11. Which of the following activities can most directly decrease contribution to increased greenhouse gases in the atmosphere?
 - a. Buying organic fruit at the grocery store
 - b. Turning off the water when you brush your teeth
 - c. Recycling aluminum cans
 - d. Riding your bike to school instead of driving

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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 over 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.