

# Post-Assessment: Carbon & Climate

Instructions: Imagine that your class is about to welcome three new students. It will be everyone's responsibility to teach them what we have learned about Carbon & Climate. Here is what they have to say about it:

## PART A: New Classmates

The climate is changing because people are putting extra carbon dioxide in the atmosphere. If it weren't for humans, our climate wouldn't change.

Forests play an important role in keeping carbon out of the atmosphere because trees absorb carbon dioxide. Planting more trees is enough to stop climate change.

There is nothing we can do about climate change. Nature is the only thing that can affect the climate and its changes over time.



Logan

José

Shawna

- 1 Analyze each student's statement. Underline all of the correct parts, and circle all of the comments that are either mistaken or debatable.

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2 Look at your circled statements again. How would you reply to these ideas, based on what you have learned in class? Remember to provide evidence to support your claims.

Logan: \_\_\_\_\_

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José: \_\_\_\_\_

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Shawna: \_\_\_\_\_

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## PART B: Carbon & Climate Quiz



Instructions: Help Logan, José, and Shawna complete the following quiz about climate change. For each statement or question, circle the correct answer.

### True or False?

- 1 Weather and climate are two words for the same thing.  
True      False
- 2 The carbon cycle is the flow of carbon through living things and the environment.  
True      False
- 3 A single carbon atom always travels through the same processes, in the same order as it moves through the carbon cycle.  
True      False
- 4 All carbon dioxide found in the atmosphere (air) is unnatural.  
True      False
- 5 Some actions humans take increase the amount of carbon dioxide in the atmosphere, and some actions decrease it.  
True      False
- 6 Until recently, Earth's climate has always been the same.  
True      False



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## Multiple Choice

- 7** How do scientists know how much carbon dioxide was in the Earth's atmosphere 800,000 years ago?
- A. Studying tree rings
  - B. Studying air bubbles in ice cores
  - C. Carbon dioxide readings from Mauna Loa Observatory in Hawaii
  - D. All of the above
- 8** How can we use forests to study climate and climate change?
- A. The type of forest found in a region is directly related to the climate.
  - B. Changes in forest regions can help us understand the effect of climate change.
  - C. Changes in forest species can provide insight into climate changes that may be occurring.
  - D. All of the above
- 9** What is one change that scientists have seen in plant species that they believe is related to changing climates?
- A. Plants are holding more water in their stems.
  - B. Plants are developing a natural sunscreen in their leaves to block the sun's rays.
  - C. Plants are blooming earlier in the spring and continuing to grow later in fall.
  - D. All of the above
- 10** Which of the following describes the most reliable source you might use to research climate change?
- A. The first article that comes up after a Google search
  - B. Recent article by a university professor that cites the sources of its information
  - C. A blog site sponsored by a political group
  - D. An academic article published several years ago