

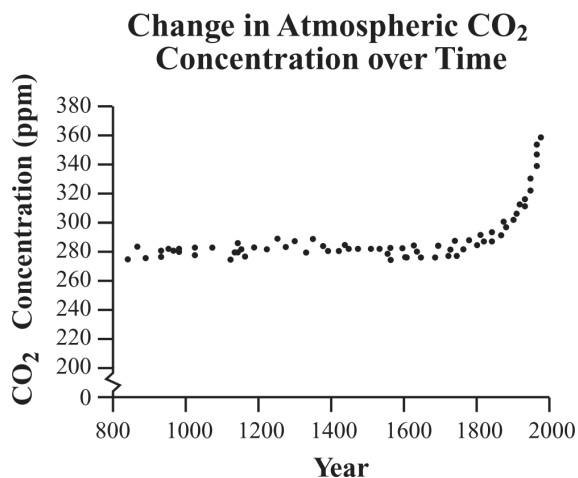
Review Quiz for Man-Made Global Climate Change

Name: _____

Date: _____

- How do scientists know what the temperature and levels of carbon dioxide were 100,000 years ago?
 - By examining carbon isotopes
 - By examining records kept by the fossil fuel industry
 - By examining gas bubbles in ice cores
 - By examining fossils of animals
- Why is increased levels of methane in the atmosphere not mentioned as much as increased levels of carbon dioxide?
 - It is not a greenhouse gas
 - It has a much shorter residency time
 - It is easily stored in the ocean
 - All of the previous
- Cellular respiration, decomposition, combustion, and photosynthesis are processes that drive which of the following cycles in ecosystems?
 - the carbon cycle
 - the nitrogen cycle
 - the phosphorus cycle
 - the water cycle

- A graph of atmospheric carbon dioxide concentration over time is shown below.



Scientists are investigating the cause of the large increase in atmospheric carbon dioxide concentration since about 1800. Which of the following provides the *best* explanation for the increase?

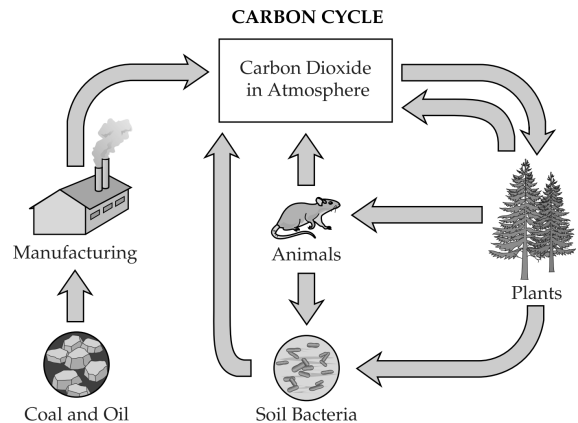
- eruptions of large volcanoes
 - use of fossil fuels by humans
 - natural fluctuations of climate
 - photosynthesis by phytoplankton
- Which statement *best* describes the roles of photosynthesis and respiration in the carbon cycle?
 - Respiration and photosynthesis both add carbon to the atmosphere.
 - Respiration and photosynthesis both remove carbon from the atmosphere.
 - Respiration adds carbon to the atmosphere, while photosynthesis removes carbon from the atmosphere.
 - Photosynthesis adds carbon to the atmosphere, while respiration removes carbon from the atmosphere.

6. Which nonrenewable energy source comes from the remains of dead organisms?
- A. gasoline B. solar power
C. geothermal heat D. hydroelectricity
7. Assume the use of fossil fuels continues to increase over the next decade. What prediction are scientists *most* likely to make for carbon dioxide and temperature change?
- A. Carbon dioxide will increase, causing an increase in temperature.
B. Temperature will increase, causing a decrease in carbon dioxide.
C. Carbon dioxide will increase, and temperature will remain the same.
D. Temperature will increase, and carbon dioxide will remain the same.
8. In the past 100 years, levels of atmospheric carbon dioxide have increased as the result of the burning of fossil fuels. Other processes in the carbon cycle have absorbed some of the carbon released by this combustion.

Which of the following *most likely* have absorbed excess carbon released by combustion?

- A. animals B. glaciers
C. plants D. rocks

9. The diagram below shows part of the carbon cycle. Use the diagram to answer the following question(s).



Which of these would lead to an increase in carbon dioxide in the atmosphere?

- A. a decrease in respiration
B. a decrease in the ozone layer
C. an increase in photosynthesis
D. an increase in the burning of fossil fuels
10. Leaves fall from deciduous trees in autumn. The carbon in these leaves is returned to the atmosphere through which of the following processes?
- A. condensation B. decomposition
C. photosynthesis D. transpiration