



Carbon cycle quiz—Alternative

Welcome to the Carbon cycle quiz. Many purchase decisions have implications for greenhouse gas production and the carbon cycle.

How well do you understand these processes and impacts? Test yourself with these 11 multiple-choice questions.

Question 1: Select the option that lists only greenhouse gases.

- oxygen, nitrous oxide, CFCs
- carbon dioxide, methane, ozone
- water vapour, helium, methane
- nitrogen, water vapour, carbon monoxide
- all of the options

Question 2: Climate change is also called the greenhouse effect. What is the glass in a greenhouse being compared with?

- the atmosphere
- the hydrosphere
- the lithosphere
- the biosphere

Question 3: Select the key processes in the carbon cycle?

- photosynthesis, respiration and combustion
- neutralisation, breathing, leaching
- volcanic eruptions, subsidence, hydrogen burning
- decomposition, death, precipitation

Question 4: Which statement provides a summary of global warming?

- It is the result of a decrease in heat energy output into space.
- It is the result of increased solar radiation due to the hole in the ozone layer.
- It is the result of increased reflection of solar radiation from Earth.
- It is the result of decreased solar radiation.

Question 5: What negative impacts result from increased greenhouse gases on the hydrosphere? Select two options.

- ocean acidification
- coral bleaching
- increased ultraviolet light levels
- increased frequency of droughts

Question 6: Efforts to reduce greenhouse gas emissions in Australia have resulted in the promotion of hybrid, electric or more fuel efficient cars. Select the option that best summarises the reasons for this.

- Cars that use fossil fuels emit greenhouse gases.
- Most of our electricity comes from fossil fuel driven power stations.
- Australia has relatively cheap electricity.
- 'Green' sources of electricity are being incorporated into the electricity supply.

Question 7: Methane is a greenhouse gas that is 20 times more effective at trapping the Earth's heat than carbon dioxide. Why isn't it targeted for reduction in the way that carbon dioxide is? Choose all the options you think are correct.

- Its human-related sources (the fossil fuel industry, waste management, rice growing and livestock raising) are more difficult to address.
- It has a shorter lifespan in the atmosphere than carbon dioxide.
- 60% of the methane released comes from natural wetlands and termites.
- The upward trend in carbon dioxide emissions is more consistent than the trend in methane.
- Atmospheric levels of carbon dioxide are much higher than methane.

Question 8: Plasma televisions use a lot more electricity than the equivalent size LED television. What can you deduce from this?

- Energy is destroyed in an LED television.
- Energy is destroyed in a plasma television.
- Plasma televisions are better than LED televisions.
- Running a plasma television produces more carbon dioxide than running an LED television.

Question 9: Select the reason why one refrigerator may be more energy efficient than another.

- set at a lower temperature
- better insulation
- brighter colour
- larger size

Question 10: In the past, climate has changed between wetter, warmer times and cooler, drier times. What is the main difference between climate change in the past with what is happening today?

- Past changes were the result of natural change.
- Past changes were much more rapid.
- Past changes did not impact on humans.
- Past changes did not affect ocean currents.

Question 11: It is predicted that global warming will not impact all areas of Earth in the same way. What is the reason for the difference in effects of global warming?

- currents in the atmosphere and hydrosphere
- currents in the mantle and outer core
- movements in the biosphere
- movements in the lithosphere
- all of the options