

Teacher Guide & Answers

Passage Reading Level: Lexile 1240

1. What happens when the atoms of a substance are regrouped?

- A gold becomes malleable
- B the atoms break apart and disappear
- C **a new substance is formed**
- D the substance stays the same

2. The creation of carbon monoxide is an effect. What is one cause?

- A the regrouping of the atoms in table salt
- B the burning of fossil fuels
- C cleaning swimming pools
- D **operating a stove**

3. Table salt can be separated into sodium and chlorine. Sodium is explosive. Chlorine is a gas that can kill people.

What can be concluded from the statements above?

- A A harmful compound can become harmless when its elements are separated.
- B **A harmless compound can become harmful when its elements are separated.**
- C Breaking a compound into its separate elements has no noticeable effects.
- D Breaking a compound into its separate elements can create carbon dioxide.

4. Based on the information in the passage, what is true of gases?

- A **Some, but not all, gases are harmful to humans.**
- B Any gas with carbon in it is not harmful to humans.
- C All gases are harmful to humans.
- D No gases are harmful to humans.

5. What is this passage mainly about?

- A Germany's use of chlorine in World War I as a chemical weapon
- B hydrochloric acid, aspartame, fructose, citric acid, and gelatin production
- C the similarities and differences between carbon dioxide and carbon monoxide
- D **changes in chemical compounds and the effects of those changes**

6. Read the following sentences: "When the atoms of a specific substance are regrouped, a new substance is formed with often vastly different **properties** from the original substance. Occasionally something completely harmless, or even necessary, can become dangerous or lethal when its molecules (a grouping of two or more atoms) are regrouped."

What does the word **properties** mean above?

- A extremely large amounts
- B places where experiments are done
- C **qualities or characteristics**
- D elements or compounds

7. Choose the answer that best completes the sentence below.

Oxygen by itself is not harmful; _____, it can become harmful when combined with carbon.

- A **however**
- B for instance
- C in summary
- D namely

8. What is hydrochloric acid?

Suggested answer: Hydrochloric acid is a solution of hydrogen and chlorine in water.

9. What is hydrochloric acid used for?

Suggested answer: Hydrochloric acid is used for household cleaning and food processing.

10. Should people make changes to chemical compounds? Support your answer with evidence from the passage.

Suggested answer: Answers may vary, as long as they are supported by the passage. Students arguing that people should not make changes to chemical compounds may point out the dangers of doing so. For example, breaking salt into its component elements, sodium and chlorine, creates two harmful substances. On the other hand, students may argue that combining elements can be helpful. One example is hydrochloric acid, a combination of hydrogen, chlorine, and water that is used for household cleaning and food processing.