



# knowledge quiz

## Chemistry

Name \_\_\_\_\_

1. In a chemical reaction, a new substance is created that is difficult to change back into its original ingredients. An example of this process is
  - A. chopping wood.
  - B. boiling water.
  - C. beating an egg.
  - D. baking a cake.
2. Fuel cells combine hydrogen and oxygen to produce energy. What by-product would a fuel cell car produce?
  - A. vinegar
  - B. sulfuric acid
  - C. water
  - D. ammonia
3. The total amount of matter is always conserved in a mixture. Why, then, might a mixture weigh less after a new substance is added to it?
  - A. This could never happen.
  - B. The new substance floated on the other substances.
  - C. Some of the ingredients were changed into gas.
  - D. Some of the ingredients were changed into a solid.
4. When acids and bases are mixed, a chemical reaction occurs. Which of the following would you expect to react with baking soda (a base)?
  - A. pure water
  - B. baking powder
  - C. air
  - D. vinegar
5. Chemistry plays an important role in the human body. Which of the following demonstrates this?
  - A. the production of sugars through the process of photosynthesis
  - B. the digestion of food
  - C. the division of cells to form new tissues
  - D. combustion



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6. In a solution, a solid or gaseous substance dissolved in a fluid is called a solute. Which of the following could be a solute in water?
  - A. wood
  - B. sand
  - C. oil
  - D. sugar
  
7. The process of oxidation occurs when oxygen reacts with another substance. Which of the following is an example of oxidation?
  - A. photosynthesis
  - B. the reaction of water with sodium
  - C. rusting
  - D. the reaction of vinegar with baking soda
  
8. Litmus paper turns red when dipped in an acid, and blue in a base. What color would your stomach juices turn litmus paper?
  - A. red
  - B. purple
  - C. blue, then red, then blue again
  - D. blue
  
9. Chemical reactions involve chemical changes. Which of the following is always a sign that a chemical reaction has taken place?
  - A. a new substance
  - B. no change
  - C. a change in size
  - D. a higher temperature
  
10. Two solids combine and instantly change into a rapidly expanding gas. This chemical reaction would describe
  - A. evaporation.
  - B. an implosion.
  - C. an explosion.
  - D. oxidation.