

Use with textbook pages 272–277.

Factors affecting the rate of chemical reactions

Match the Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

Term	Descriptor
1. _____ catalyst	A. a measure of how much area of an object is exposed
2. _____ temperature	B. the amount of substance dissolved in a given volume of solution
3. _____ surface area	C. a measure of the average kinetic energy of all the particles in a sample of matter
4. _____ concentration	D. a substance that speeds up the rate of a chemical reaction without being used up itself or changed
5. _____ rate of reaction	E. a measure of how quickly products form, or given amounts of reactants react, in a chemical reaction
6. _____ catalytic converter	F. a stainless steel pollution-control device that converts poisonous gases from the vehicle's exhaust into less harmful substances

7. When you walk through a crowded hallway at school, you are more likely to bump into another person. To which of the following factors that affect rate of reaction is this analogy referring?

- A.** catalyst **C.** surface area
B. temperature **D.** concentration

8. Which of the following are true about how temperature affects the rate of reaction?

I.	heating causes the particles of the reactants to move more quickly
II.	lowering the temperature will raise the energy level of the particles
III.	increasing the temperature results in more collisions between the particles

- A.** I and II only
B. I and III only
C. II and III only
D. I, II, and III

9. Increasing which of the following will increase the frequency of collisions?

I.	temperature
II.	surface area
III.	concentration

- A.** I and II only
B. I and III only
C. II and III only
D. I, II, and III

10. Which of the following will lower the rate of reaction?

- A.** adding an enzyme to the reaction
B. decreasing the temperature from 40°C to 10°C
C. breaking a chunk of calcium up into smaller pieces
D. increasing the amount of solute dissolved in a solution