

S8P1-4

1. Evidence of a chemical change would be a

- A. melting popsicle.
 - B. spinning top.
 - C. spilled bucket of water.
 - D. rusting car fender.
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2. A different chemical substance is formed when a

- A. piece of cloth is cut.
 - B. cup breaks.
 - C. candle burns.
 - D. piece of chalk breaks.
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3. Lucy noticed that her coin collection had begun to tarnish. Some of the metal in the coins had begun to change color. The formation of tarnish is **most** similar to which of the following changes?

- A. shredding a piece of paper into hundreds of tiny strips
 - B. dropping a dinner plate on the floor
 - C. melting ice cubes in a glass of juice
 - D. burning a piece of paper to ashes in a fireplace
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4. What will happen if you mix vinegar and baking soda?

- A. It will explode.
 - B. Nothing will happen.
 - C. It will bubble up rapidly.
 - D. It will turn bright red.
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5. Which is an example of a chemical change?

- A. ice melting
 - B. salt crystals being ground to powder
 - C. water evaporating
 - D. wood burning
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6. Which action would result in a chemical change?

- A. crumpling several sheets of paper
 - B. pounding a nail into a piece of wood
 - C. peeling and slicing a carrot
 - D. making blueberry muffins
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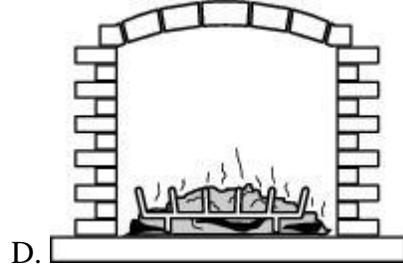
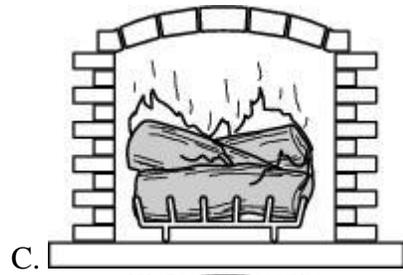
7. A chemical change for a piece of metal would be

- A. being bent in half.
 - B. getting cut into two pieces.
 - C. being painted.
 - D. getting rusty.
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8. A difference between physical change and chemical change is that

- A. chemical change involves energy while physical change does not.
 - B. physical change involves energy while chemical change does not.
 - C. different kinds of molecules are present after a physical change but not after a chemical change.
 - D. different kinds of molecules are present after a chemical change but not after a physical change.
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9. Look carefully at the pictures below. Which picture shows only a physical change in the wood?



10.

During science lab, some students added small pieces of magnesium (Mg) to hydrochloric acid (HCl). They noticed that bubbles formed, the test tube got hot, and the magnesium disappeared.

Which of the following is a sign that a chemical reaction has taken place in **this** experiment?

- A. odor
 - B. formation of a gas
 - C. decrease in temperature
 - D. formation of a precipitate
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11.

A group of students were asked to identify three white powders. The students used physical and chemical properties to identify the powders. They computed the density of each powder. They checked to see if any dissolved in water. One of the powders did not dissolve in water and they thought it was cornstarch. They knew that cornstarch felt slippery and reacted with iodine. The students put a few drops of iodine on each white powder. One powder turned black; it was definitely cornstarch. Another powder, baking soda reacted with vinegar. It fizzed and the test tube got hot.

During the experiment, which of these provided evidence of a physical property of one of the white powders?

- A. vinegar fizzed
 - B. test tube got hot
 - C. cornstarch turned black
 - D. cornstarch felt slippery
-

12.

A group of students were asked to identify three white powders. The students used physical and chemical properties to identify the powders. They computed the density of each powder. They checked to see if any dissolved in water. One of the powders did not dissolve in water and they thought it was cornstarch. They knew that cornstarch felt slippery and reacted with iodine. The students put a few drops of iodine on each white powder. One powder turned black; it was definitely cornstarch. Another powder, baking soda reacted with vinegar. It fizzed and the test tube got hot.

Which of these is an observed chemical property?

- A. color of powders
 - B. density of powders
 - C. powder dissolves in water
 - D. powder reacts with vinegar
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13. Which symbol represents carbon?

- A. Ca
 - B. N
 - C. K
 - D. C
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14. Which is usually true about metals?

- A. Metals melt at lower temperatures than any other elements.
 - B. Metals always have their atoms arranged into crystals.
 - C. Metals do not combine easily with nonmetals.
 - D. Metals conduct electricity more easily than nonmetals.
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15. All metallic elements are

- A. powdery solids.
 - B. good thermal insulators.
 - C. good conductors of electricity.
 - D. easily melted into liquids.
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16. The element beryllium (Be, atomic number 4 and atomic mass 9) is right above magnesium (Mg, atomic number 12 and atomic mass 24) in the periodic table. How many more electrons does magnesium have than beryllium?

- A. 5
 - B. 7
 - C. 8
 - D. 15
-

17. Which elements are represented by the symbols in the formula NaCl?

- A. sodium, chlorine
 - B. sodium, oxygen, hydrogen
 - C. hydrogen, chlorine
 - D. chlorine, oxygen
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18. On the periodic table, nitrogen is represented by N (atomic number 7). N is a chemical

- A. equation.
 - B. period.
 - C. symbol.
 - D. group (family).
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19. The chemical symbol Al represents which metal on the periodic table?

- A. arsenic
 - B. antimony
 - C. aurum
 - D. aluminum
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20. Each element in the periodic table is assigned an atomic number. This number is the same as

- A. the number of electrons in the atom's nucleus.
- B. the number of protons in the atom's nucleus.
- C. the number of neutrons in the atom's nucleus.
- D. the number of protons and neutrons in the atom's nucleus.

Answer Key

1. D) rusting car fender.
 2. C) candle burns.
 3. D) burning a piece of paper to ashes in a fireplace
 4. C) It will bubble up rapidly.
 5. D) wood burning
 6. D) making blueberry muffins
 7. D) getting rusty.
 8. D) different kinds of molecules are present after a chemical change but not after a physical change.
 9. B) 
 10. B) formation of a gas
 11. D) cornstarch felt slippery
 12. D) powder reacts with vinegar
 13. D) C
 14. D) Metals conduct electricity more easily than nonmetals.
 15. C) good conductors of electricity.
 16. C) 8
 17. A) sodium, chlorine
 18. C) symbol.
 19. D) aluminum
 20. B) the number of protons in the atom's nucleus.
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